United States Gold Coins

An Illustrated History

By Q. David Bowers

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United States Gold Coins

An Illustrated History

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United States Gold Coins
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by Q. David Bowers
Dr. Richard A. Bagg
Research Associate

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His weekly column, "Numismatic Depth Study," has appeared in *Coin World* for many years and has earned several "Best Columnist" awards from the Numismatic Literary Guild. His "Numismatic Nostalgia" column appears monthly in *The Numismatist*, official journal of the American Numismatic Association. His byline has appeared in all other major numismatic publications, including *The Numismatic Scrapbook Magazine*, *Numismatic News*, *Coins Magazine*, *COINage*, and various specialized journals. In addition he has written for the *Encyclopedia Americana* (the numismatic section and the annual yearbook).

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His research has included studies in the grading of United States coins, an effort which earned the coveted Heath Literary Award, the United States gold series of regular and pattern issues, the life of Ephraim Brasher, and work with many important collections, including Wilkison, Garrett, Adams, and *The United States Gold Coin Collection*. Articles by him have appeared in *The Numismatist*, *Numismatic News*, and *Coin World*.

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Preface

In 1982 The United States Gold Coin Collection, a cabinet of coins formed during the 1930's and 1940's, was consigned for unreserved public auction sale to Bowers & Ruddy Galleries. The group of coins, unprecedented in its scope, contained each and every date and mintmark from the first year of gold coin issuance in 1795 to the last, 1933.

Thus was presented an opportunity: to create a book describing the panorama of American gold coinage and, at the same time, to illustrate it with legendary rarities.

Within the chapters that follow are descriptions and illustrations of such pieces as the 1861 Dahlonega Mint gold dollar issued when the federal coining facility was captured by southern forces during the Civil War; the sparkling cameo-like 1841 quarter eagle, a coin affectionately called "The Little Princess" by cataloguers over the years; the curious, historical, and rare $4 gold stellas of 1879 and 1880; the 1854-S half eagle; the fascinating 1804 Proof eagle; the 1861-S Paquet reverse double eagle and others. Included among these are two coins of the ultimate degree of rarity: the 1870-S $3 gold piece is the only known example of its issue; and the 1822 half eagle is the only specimen in private hands and is finer than the other two examples known, both of which are in the Smithsonian Institution. And then there is the story of the 1841-O half eagle. Does the specimen actually exist at all?

How were coins made at the Philadelphia Mint? In the following pages you will go on a "guided tour" of the institution in 1885, and on another tour in 1903 by which time the facilities had been moved into a new building. As the author did, you may learn for the first time that prospective grooms who visited the Mint often purchased new $20 gold double eagles to give to ministers officiating at wedding services and you may learn that certain coins were "bounced" against a heavy metal table to be sure they had the proper "ring" or tone!

The story of President Theodore Roosevelt and his relationship with sculptor Augustus Saint-Gaudens is chronicled in detail. The president sided with Saint-Gaudens and conducted a private "war" with the Mint! How fortunate we are that the sculptor's home and studio are preserved today as they were at the time of his death in 1907. A special photographic portfolio in the present book takes you to the location where the rare and famous MCMVII Extremely High Relief $20 and other issues were created years ago.

While gold dollars, eagles, double eagles, and other coins are incredibly interesting, much of their appeal is quintessential — and lies not between the surfaces of the coins themselves but, rather, in their romantic history and background. The gold discovery in the Carolinas, the California Gold Rush, the Cripple Creek Gold District ("the world's greatest gold camp" as it was called in 1900), and other locales are described and illustrated, and the very function of gold in American lore, legend, and finance is discussed.

Those who have gone before — the great collectors of the nineteenth and twentieth centuries — come to life in the present book. Joseph J. Mickley, T. Harrison Garrett, Harold P. Newlin, Lorin G. Parmelee, John G. Mills, Harlan P. Smith, Matthew A. Stickney, George H. Earle, Virgil Brand, William Forrester Dunham, John H. Clapp, Col. E. H. R. Green, William Cutler Atwater, King Farouk, Josiah K. Lilly, Louis E. Eliasberg, Sr., Amon Carter, and others each played a role on numismatics' golden stage. And then there were the dealers, such as the prominent B. Max Mehl, whose favorite mark of punctuation was the exclamation point. The enthusiasm of Mehl as well as the personalities of other dealers comes through in the pages to follow.

Within American numismatics the collecting of gold coins forms a special area of interest. Until now, no single volume has "brought it all together," to use popular parlance. This, indeed, has been the objective of the author; this, plus a conveying of what has been a preoccupation during the past year — the sharing of facts, history, anecdotes, and, by means of color illustrations, the coins themselves.

Alas, with the signing of Franklin Delano Roosevelt's proclamation of April 5, 1933, gold coins as a medium of exchange passed from the American scene, probably for all time. However, gold coins still remain an intense area of focus for many citizens, many of whom are fortunate enough to possess these numismatic reminders of our Golden Age.

Q. David Bowers
September 2, 1982

Counting $20 gold coins at the Philadelphia Mint, 1894.

American Gold and Gold Coinage: An Overview

1

Gold! The elusive precious yellow substance has fired the imagination of mankind for centuries. Jason and his Argonauts sailed in quest of the Golden Fleece. "And with the ever-circling years comes round the age of gold," the carol goes. Indeed, the highpoint in any environment, discipline, or culture is usually characterized as "the golden age." And, no better code of personal conduct has been devised than the Golden Rule.

In Melville's novel, *Moby Dick*, Capt. Ahab mobilizes his crew to intense action by posting as a reward for the capture of the white whale a golden doubloon nailed to the mast. Visions of El Dorado, a golden man in a golden lake, lured Spanish conquistadors to South America centuries ago. The golden fortunes of Croesus, Midas, and Montezuma are part of lore and legend. In the 19th century when the admonition "go West young man!" was given, the object was gold.

Gold has formed the subject for countless volumes and narratives ranging from journals of world discovery to exhortations to amass as much gold as possible in anticipation of doomsday.

As a glance at *Bartlett's Familiar Quotations* will easily verify, literature from the Bible down to the present day is strewn with innumerable references to the metal. An interesting volume, *Gold the Real Ruler of the World*, by Franklyn Hobbs, published in 1941, gathered together many quotations, especially those with emphasis on gold's monetary and financial value. Samples: "Gold is the cornerstone of the whole business and financial structure," "Gold is the key to the destiny of nations," "Gold is to commerce what blood is to the body," "Gold is wealth, and the whole of wealth," "Gold is one of the greatest world forces that could be imagined," "No edict and no legislation can take the value out of gold," "The power of the Roman Empire waned as she lost her gold," and the poignant "Gold is responsible for disagreement between men and wars between nations," as well as the philosophical "Gold is where you find it, but some of us never find it."

Shakespeare referred to gold many times, noting, for example that "The meat which made Caesar great was gold," and "Gold is the strength, the sinews of the world."

Sometimes golden dreams were tarnished, as the poet Robert Service related in a tale of the Klondike:

> I wanted the gold and I got it
> Came out with fortune last fall.
> Yet somehow life's not what I thought it,
> And somehow the gold isn't all.

"When spring comes to Nova Scotia the diggers return to Oak Island as regularly as the swallows return to Capistrano. The treasure digging began in 1795 and will no doubt continue until the riddle is solved by modern science." The words are those of Robert I. Nesmith, the numismatist who has chronicled many treasures, and the reference is to the mystery of Oak Island. Is a vast treasure worth countless millions of dollars buried there, or is the entire thing a hoax? No one knows, and in the meantime another treasure has been spent trying to find the answer. From Edgar Allan Poe's *The Gold Bug* to the twentieth century Hardy Boys' adventure *Hunting for Hidden Gold*, the quest for buried treasure has fascinated youths and adults alike who dream of chests full of gleaming golden doubloons or double eagles awaiting discovery.

In the typical pose one characterizes today with the "Wild West" this miner, shown in an 1850 daguerreotype, pans for gold in a California creek bottom. (New York Public Library Picture Collection)

Immigrants who traveled via the overland routes to California often encountered many difficulties and hardships. The trails were littered with abandoned wagons and provisions, dead horses and oxen, and other evidence of privation. Cholera also took a fearsome toll, and in the wilder areas attacks by parties of Indians posed a threat. Sometimes adventurers were their own worst enemies. Abandoned provisions were often scattered or spoiled so that others could not use them.

A nineteenth century engraving of placer mining in California. Hundreds of miles of streambeds, ravines, rivers, creeks, and gullies were torn apart in the search for the precious yellow metal.

Indeed, the romantic and historical connotations of gold are unparalleled. So, it is perhaps natural that numismatists with the means to do so often gravitate toward collecting gold dollars, half eagles, double eagles, or some other specialty, realizing that at once these coins embody history and financial treasure.

While gold coins of ancient Greece and Rome, medieval times, and world issues of the past several centuries are highly desired by numismatists, the present text focuses on regular gold issues made under the aegis of the United States Mint. By 1792, when the Philadelphia Mint was established, gold coins were an important part of the channels of American commerce. Issues of England, France, Holland, Spain, Mexico, and other countries circulated at varying rates. Best known was the Spanish doubloon, produced by various mints in the Spanish empire in Central and South America, and equivalent in value to 16 Spanish milled dollars. Used over a period of many years, the massive doubloons or eight escudo pieces became a part of pirate legend and folklore. Interestingly, Spanish doubloons and many other foreign issues remained legal tender in the United States until 1857, well over a half century after the United States began issuing its own gold coins.

The first Philadelphia Mint gold issues, $5 half eagles and $10 eagles, were produced in 1795, followed by $2.50 quarter eagles in 1796. At the time there was no native gold mining industry. Supplies of the precious metal were obtained from outside the country, in the form of wrought items, bars and ingots, and especially foreign coins.

While Indians and Mexicans had gathered gold from stream beds in the West for many years, the first significant discoveries of gold to be commercially exploited in territory comprising what is now the United States were made in Georgia and North Carolina. The Reed Mine, believed to be one of the first gold mines in the United States, is said to have been the result of a discovery made in 1799 by Conrad Reed, a young boy who with his sister and younger brother discovered a chunk of gold in Meadow Creek, a small stream on his father's property. The gold was shown to a silversmith who lived near the discovery site in Cabarrus County, North Carolina. The tradesman, apparently unfamiliar with native gold, did not recognize its value and stated that it was of an unknown metal, but not gold. John Reed, the land owner, used the chunk for a doorstop until 1802 when he took it with him to Fayetteville and showed it to a jeweler who gave a proper identification. It is said that the jeweler asked Reed what he wanted for it and the latter, unaware of the value of gold, requested $3.50, a sum which was immediately paid.

Impressed with his good fortune, Reed explored the creek with several associates, Frederick Kaisor, Martin Phifer, and James Love, finding in 1803 a 28-pound nugget. It soon developed that the entire length of the creek for about a mile was studded with gold ranging in size from powder and flakes to substantial pieces.

Soon thereafter, a later discovery which was developed as the Dunn Mine was found northeast of Charlotte. By 1821 a territory comprising nearly 1,000 square miles was being worked by gold miners. The ensuing decade saw many more discoveries, with the result that by 1830 the district had supplied the majority of native metal used in United States gold coinage for a period of many years. The ephemeral private mint established in Georgia in 1830 by Templeton Reid and the Rutherfordton, North Carolina mint established shortly thereafter by Christopher Bechtler were a boon to local miners and merchants, for raw gold could be converted into spendable coins at less cost and in a shorter time than sending it to Philadelphia.

The importance of the Georgia and North Carolina gold sources was recognized by Congress and in 1838 branch government mints were opened at Dahlonega, Georgia and Charlotte, North Carolina.

Commercial gold mining continued in the area for many years, with the branch mints operating until the Civil War forced their closure in 1861. By that time most readily accessible deposits had been exhausted.

During the first half of the nineteenth century gold coins, predominantly half eagles, were produced at the Philadelphia, Dahlonega, and Charlotte mints in addition to a coinage facility opened in New Orleans in 1838. Seeking to provide an intrinsic worth to the American coinage system, and realizing the problems that worthless Continental currency issued by the federal government had caused, Congress in 1792 pro-

vided for the free and unlimited coinage of silver and gold at a value ratio of 15 to one. Over the years new discoveries of precious metals and changes in the world's monetary system played havoc with the ratio, with the result that during certain times gold coins could be melted down at a profit and exchanged for silver, and vice-versa. For a period of years culminating in 1834, gold coins traded at a premium in relation to silver, with the result being that the vast majority of earlier-dated United States quarter eagles, half eagles (in particular), and eagles went to bullion brokers, bankers, and others who melted or exported them, thus accounting for the great rarity of many of those issues today. After the exploitation of California gold deposits, beginning in 1848, the balance was reversed, and gold became "common" in relation to silver, resulting in widespread melting of silver coinage until 1853, when the authorized weights of silver coins were reduced.

Of all events in United States history, the California Gold Rush is one of the most significant and romantic. The discovery of gold in the race of Sutter's Mill in January 1848 set the stage for the westward expansion which ultimately was to define the boundaries of the United States as we know them today. Although it has been overlooked by many historians, by 1848 gold production had been accomplished on a commercial basis elsewhere in California, although the facts are not as well known. Sometime toward the end of 1840 or early in 1841, a Mexican mineralogist, Don Andres Castillero, journeying from Los Angeles northward to Monterey, gathered some pebbles at Las Virgenes Rancho. Castillero showed these to friends in Santa Barbara and stated that the pebbles, a variety of pyrite, were a good indication that gold might be nearby. One of the listeners, Francisco Lopez, who at the time lived at Piru Rancho, was gathering clumps of wild onions a few months later, pulling them up by their roots, when he saw a similar pebble and remembered its connection with gold. Looking more carefully in the earth he found a small nugget of the precious metal.

News of the discovery spread, and within a few weeks several hundred people were busy washing earth to obtain dust, flakes, and nuggets. From this location a parcel of gold dust was sent to the Philadelphia Mint by the Hon. Abel Stearns of Los Angeles, who transmitted it with Alfred Robinson in a merchant sailing ship around Cape Horn. It consisted of 18.34 ounces valued at $344.75 after coining.

Documentation of the value of gold found in the area known as San Feliciano Canyon is sketchy, with William Heath Davis in *Sixty Years in California* giving the figure of $80,000 to $100,000 for the first two years after the discovery, and citing a single shipment of $5,000 worth of dust sent to Boston on the Ship *Alert*. Hubert Howe Bancroft, California historian, stated that "By December 1843 2,000 ounces of gold had been taken from the . . . mines." Another historian, J. M. Guinn, related that Don Antonio Coronel, with the assistance of three Indian laborers, extracted $600 worth of gold dust in two months in 1842.

In California, as in Georgia, North Carolina, and other locations in the United States, gold was discovered in the form of alluvial deposits: flakes, nuggets, dust, and lumps mixed with sand in streambeds or in loose sand or soil. It is presumed that the gold was once part of a rock formation or lode which in earlier times had broken away or had become eroded. Hence, following the vast gold discoveries in northern California in 1848, miners working streambeds always dreamed of finding the so-called Mother Lode, where gold was believed to exist in nearly pure form and in large quantities in the earth.

Taking gold from streambeds was known as *placer* (pronounced "plasser") mining, placer being a Spanish term for an alluvial gold deposit. Placer mining was accomplished in several ways. The most elementary was to combine sand and gravel taken from the streambed with water in a pan. By means of a circular or sloshing motion the mixture was agitated while at the same time larger pieces of rocks, pebbles, and sediment were cast out over the edge. After this was done for some time only a small amount of gravel remained in the pan. Large nuggets could be picked out from the sediment, but retrieval of dust and small flakes was best accomplished by mixing the remainder with mercury. Any microscopic gold then formed an amalgam with the mercury metal. Later the mercury was heated and driven off, leaving nearly pure gold.

In areas in which water was scarce or nonexistent, gold-bearing sand and soil was often transported to a distant stream in bags or carts. Water was then introduced, and gold was

separated from the mixture. Alternatively, in numerous instances elaborate sluices were constructed to transport water from a stream to a gold location, often over a distance of many miles.

Winnowing, or "dry washing," was practiced by some but was a dirty and distasteful operation. By means of this process, gold-bearing soil would be spread out to dry. Crumbled to a fine powder, the earth would be tossed into the air. Lighter particles were blown away by the wind, with the result that after several repeated operations only the heavier sediment, including gold, remained in the large cloth or piece of leather used to catch the mixture.

An event that was to change the history of the world, the discovery of gold in 1848 by James Marshall, an employee of John Sutter, is described by Bancroft:

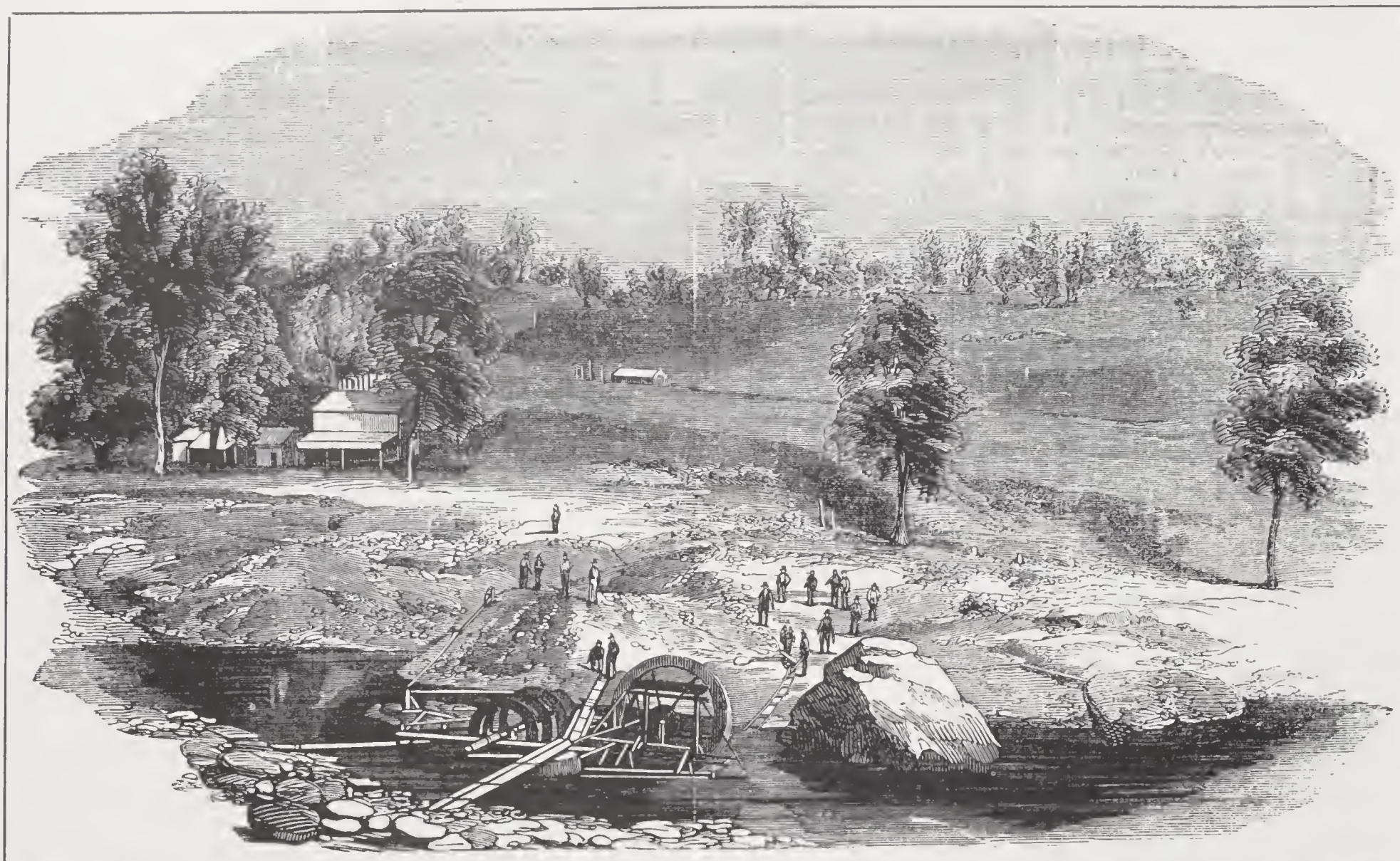
> Early in the afternoon of Monday the 24th of January 1848, while sauntering along the tail-race [of the water-powered saw mill] inspecting the work, Marshall noticed yellow particles mingled with the excavated earth which had been washed by the late rains. He gave it little heed at first; but presently seeing more, and some in scales, the thought occurred to him that possibly it might be gold. Sending an Indian to his cabin for a tin plate, he washed out some of the dirt, separating thereby as much of the dust as a 10-cent piece would hold; then he went about his business, stopping a while to ponder upon the matter. During the evening he remarked once or twice quietly, somewhat doubtingly, "Boys, I believe I have found a gold mine." "I reckon not," was the response, "no such luck."
>
> Up betimes next morning, according to his custom, he walked down by the race to see the effect of the night's sluicing, the head-gate being closed at daybreak as usual. Other motives prompted his investigation, as may be supposed, and led to a closer examination of the debris. On reaching the end of the race a glitter from beneath the water caught his eye, and bending down he picked from its lodgement against a projection of soft granite, some six inches below the surface, a larger piece of the yellow substance than any he had seen. If gold, it was in value equal to about half a dollar. As he examined it his heart began to throb. Could it indeed be gold! Or was it only mica, or sulphur of copper, or ignis fatuus! Marshall was not a metallurgist, yet he had practical sense enough to know that gold is heavy and malleable; so he turned it over and weighed it in his hand; then he bit it; and then he hammered it between two stones. It must be gold! And the mighty secret of the Sierra stood revealed!

Marshall journeyed to New Helvetia, the center of Sutter's vast ranching and farming complex, and requested a private interview with Sutter. Using instructions found in an encyclopedia, Sutter and Marshall tested the yellow substance with acid and by weighing, thus confirming the discovery.

Word soon spread, and before long other workers at the sawmill were spending every available moment of spare time during daylight hours poking in crevices and searching the American River streambed for yellow flakes and nuggets. Sutter urged them to keep the matter confidential, fearing that the sawmill, then only partially completed, would be abandoned. Favoring the certainty of wages to the unknown possibility of finding gold, the workers agreed to stay with the project, limiting gold exploration to their extra hours.

Although he urged others to keep his secret, Sutter himself could not resist telling of the discovery. Writing to a friend in Vallejo on February 10th he said, "I have made the discovery of a gold mine, which, according to experiments we have made, is extraordinarily rich." At the time the title to certain California lands was uncertain. Sutter, seeking to confirm ownership of the land along the American River, sent a trusted messenger to Col. R. B. Mason, the chief representative of the United States government in California. The envoy, Charles Bennett, was instructed to say nothing about gold but to secure the land with pasture, lumber milling, and mineral privileges, giving as a reason for including the last the appearance of *lead* and *silver* in the soil. Bancroft relates that the messenger was too weak for the purpose and carried with him in a buckskin bag some six ounces of gold. Enroute to Mason in Monterey, Bennett stopped at Pfister's store in Benicia and dazzled several listeners with stories of the gold discovery, showing them the physical evidence.

Within a few months the American River was being worked by dozens of people above and below Sutter's Mill, including many Mormons who came to California as part of a battalion and who were on their way back to the Great Salt Lake. James Marshall and an associate, James Gregson, went up the river three miles to a place they named Live Oak Bar and "picked up with their fingers, without digging, a pint of gold, in pieces up to the size of a bean," according to

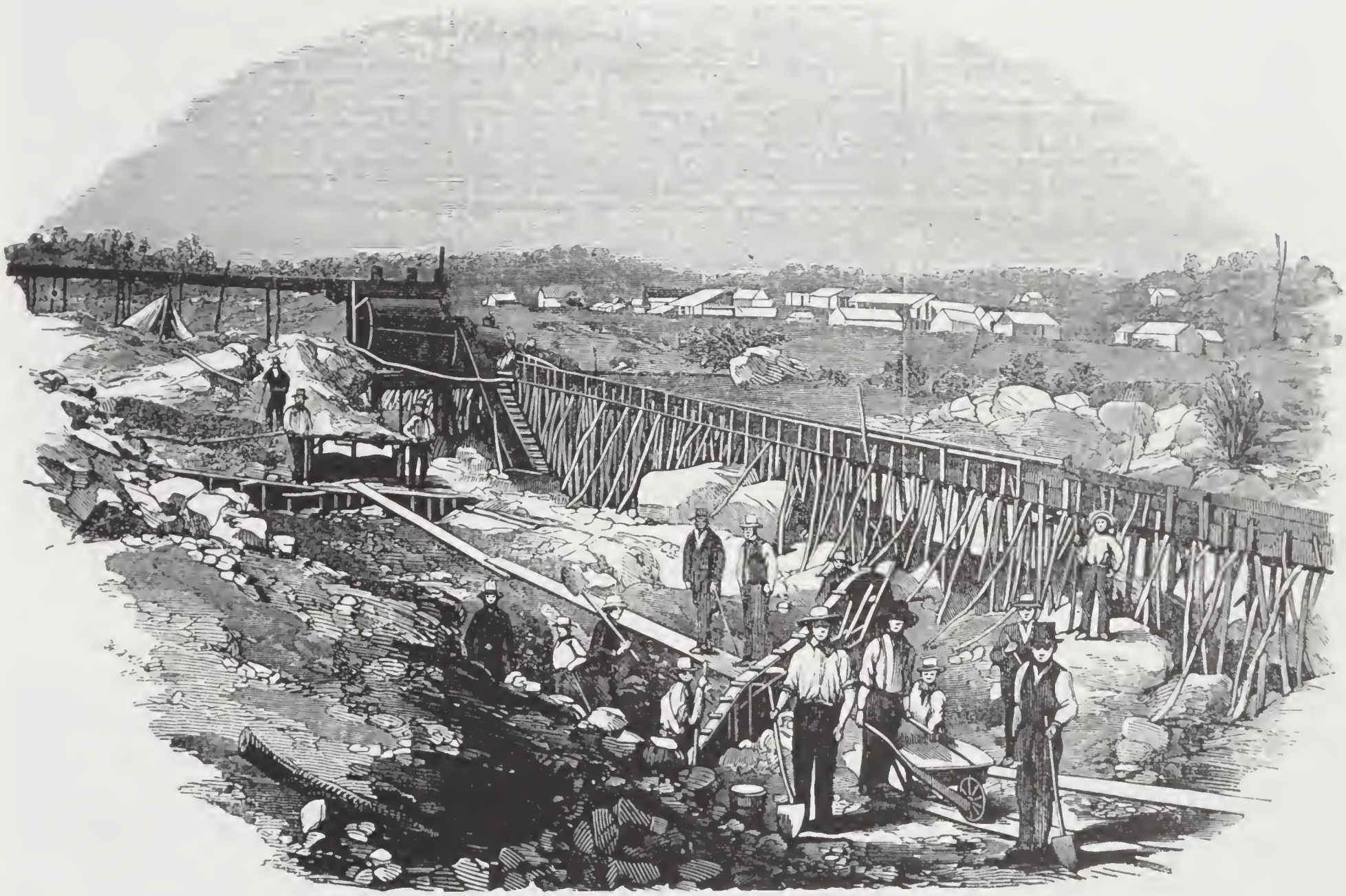


Above and below are shown two views of the same locality, a claim on Horseshoe Bar on the North fork of the American River, California, circa 1853. The white structure in the background was known as the "milk punch house" and apparently was a place of public accommodation.

By means of the "rocker" or "cradle," a mixture of gravel, soil, and water was agitated in a wood and metal device with a screened bottom. Such devices were commonplace in California, Colorado, and other placer gold locations. ("Harper's Monthly," April 1860)

The works of the Notion Co. at Barton's Bar, 1853, as sketched for "Gleason's Pictorial." The wide wheel in the background, immersed in a flowing stream, provided the mode of power to lift water into the series of sluices used to wash gold from the nearby banks.

A miner's lodgings at Ross' Bar on the Yuba River, California, 1853. ("Gleason's Pictorial")



View of the Park's Bar Co. Works on the Yuba River, California, 1853, as sketched for "Gleason's Pictorial." The enterprise is an extensive one and comprises an elaborate system of pumps and sluices for diverting water and exposing the streambed. "This year the company has made nothing; last year everyone concerned made handsomely," an article in "Gleason's Pictorial" noted. Historian Hubert Howe Bancroft relates: "Park's Bar on the Yuba was discovered in August 1848 by Stephen Cooper; John March; John P. Long and two brothers; Clay, Willis, and Nicholas Hunsaker, who afterward held important positions in Contra Costa County. Charles Covillaud opened a store there later and employed a number of Indians to dig gold for him. He married, on Christmas 1848, Mary Murphy, one of the survivors of the Donner party. He purchased the rancho where Marysville now stands, laid out the town, and named it for his wife. Parks, from whom the bar was named, came across the plains in 1848. Although 50 miners were at work when he arrived, and had been for some time, the bar was christened after him, because he was a man with a family, and more persons answered to the name of Parks than to any other."

By 1853, five years after the initial gold discovery at Sutter's Mill, streambeds for many miles in all directions were laid to waste by mining activities.

"Uncle Bill and others at mining," a previously-unpublished daguerreotype showing activities near Placerville, circa 1850. (Oakland Museum)

Gold mining in California in the early 1850s employing a sluice to wash the gold-bearing gravel. From a daguerreotype. (New York Public Library Picture Collection)

Bancroft. Additional discoveries were made by others in sandbars and in the streambed up and down the American River. Explorations spread, and gold was found in the Feather River, Clear Creek, and other locations. Within a few months an area of nearly 200 miles was involved. Bancroft relates:

> As the field enlarged so did the visions of its occupants. Reports of vast yields and richer and richer diggings began to fly in all directions, swelling under distorted fancy and lending wings to flocking crowds. In May the influx assumed considerable proportions, and the streams and ravines for 30 miles on either side of Coloma [the site of Sutter's Mill] were occupied one after another. The estimate is that there were then already 800 miners at work, and the number was rapidly increasing. Early in June, Consul Larkin estimated them at 2,000, mostly foreigners, half of whom were on the branches of the American River. There might have been 100 families with teams in tents. He saw none who had worked steadily for a month. Few had come prepared to stay over a week or fortnight, and no matter how rich the prospects, they were obliged to return home to arrange their business. Those who had no home or business must go somewhere for food . . .
>
> When [Col. R. B.] Mason visited the mines early in July, he understood that 4,000 men were still at work, which certainly cannot be called exaggerated if the Indians are included. By the turn of the season, in October, the number had certainly doubled, although the white mining population for the year could not have exceeded 10,000 men.

Early mining was accomplished by simply picking nuggets out of the streambed or by the use of pick, pan, and shovel. Soon, more sophisticated methods were introduced. Isaac Humphrey, who earlier worked in the Georgia goldfields, introduced the rocker, which consisted of a large wooden trough which had a sieve or perforated sheet iron container at the top end. This would be filled with several shovelfuls of earth. Extending along the lower part of the rocker were crosswise strips of wood spaced about a foot apart. The device was operated by rocking the trough back and forth by means of a long handle affixed to the side. Water was poured into the sieve at the upper end. As the sediment washed away it was replaced by additional quantities. Often a rocker would be worked by several people, one rocking, another shoveling, and still another adding buckets full of water (in areas in which water could not be fed by placing the rocker below an outlet). Gold, heavier than the other substances, accumulated in the riffles or crossbars.

In larger operations stationary troughs into which water was introduced at the upper end were used. Behind cleats or riffles mercury metal was deposited. Small gold flakes, bits of gold dust, and other minute gold particles formed an amalgam with the mercury and would be captured. Later, the mixture would be heated and the mercury would be vaporized, to condense in a cooling chamber into liquid for further use, with the gold remaining at the bottom of the oven or retort. The "long tom" and sluice were other related devices for capturing gold in quantity.

So far as is known, the first stamping mill in California for processing gold ore was established in June 1850 at Grass Valley. By means of mechanical iron hammers, gold-bearing quartz rock was pulverized. Then the powder was subjected to chemical processes to extract gold. Hydraulic mining, whereby entire hillsides would be washed away by streams of water directed under high pressure from hoses, was popular in the 1850s and caused extensive devastation to the landscape. During the first year or two mining was most often accomplished by individuals or small parties. Later, large companies became prevalent.

Following the initial discovery early in 1848, the population of miners consisted of transient and permanent California residents who heard the news. Beginning in September 1848, adventurers came from the Hawaiian Islands, Oregon, and Mexico, as tales of gold discoveries spread. So preoccupied were miners with finding gold that there was little time or reason for criminal activities. Disputes were settled amicably and murder and violence were almost unknown. Bancroft was only able to find two instances of tribunals in the mining region during the early times. In one case a horse thief was caught in the act, and in the other a Spaniard was captured with a bag of stolen gold dust. Both were tried, convicted, and promptly hanged by the miners.

The amount of gold actually extracted will never be known, for few records were kept. It has been estimated that in 1848 the average person mined about an ounce of gold per day, an amount equal in value to about $16 in San Francisco at the time. Those in more fortunate locations or with a greater degree of energy often made $100 per day or more, with reports in the $500 to $1,000 per day range not being unusual. Many stories of

Gold miners in Auburn Ravine on the American River, California, 1852. The trough is a "long tom" with cleats or riffles in the bottom of the sluice to catch particles of gold dust. (New York Public Library Picture Collection)

A very extensive gold mining operation near Placerville, California, probably circa 1850, as shown in a previously unpublished daguerreotype. Sluices were employed to bring water from a distance to wash the dirt and gravel cut away from a hillside. (Oakland Museum)

success made the rounds. John Sullivan, an Irishman, extracted $26,000 from the Stanislaus River, while a miner named Hudson was said to have obtained $20,000 worth of gold in six weeks of effort in a canyon near Coloma. A young boy named Davenport was reported to have found 77 ounces of gold in one day and 90 ounces the next. From a piece of ground less than four feet square on the middle fork of the Yuba River one miner reported gathering 30 pounds of gold in a 20 day period.

Gold became so plentiful that despite the higher valuation in distant San Francisco, the metal often traded hands at only $8 to $10 per ounce near the place of discovery. Indian laborers in particular had little idea of the value of gold or the mechanisms for weighing it and often sold gold for low prices or exchanged it for nearly worthless articles.

Often the results of a day's labor would be used up in living expenses. Toward the end of 1848, when miners vastly outnumbered storekeepers and supplies were scarce, flour traded for several hundred dollars a barrel, a horse worth $6 changed hands at $300, cooks earned $25 a day in wages, a wagon and team cost $50 per day to hire, and doctors charged $50 to $100 for a visit. Bancroft cites a bill given by a Coloma storekeeper in December 1848 for a luncheon for two people: one box of sardines, $16; one pound of hard bread, $2; one pound of butter, $6; a half pound of cheese, $3; two bottles of ale, $16; for a total of $43.

The next year, 1849, saw a vast influx of people from the eastern states who travelled overland by several different routes or by sea. The ocean voyage was accomplished in two main ways, by sea to Panama, a brief journey across land, and then by sea again to San Francisco; or a continuous voyage from the East Coast to the tip of South America at Cape Horn then up the western side of South America to San Francisco. Although many families made the journey, particularly using the overland routes, most adventurers were young males. The 1850 census notes that less than eight percent of the total inhabitants of the gold mining district were female, and in the mining counties the proportion was below two percent. Calaveras had only 267 women in a total population of 16,884 persons. The same county had only 69 people over 60 years of age.

The tranquility which characterized the early days ended when large numbers of emigrants arrived. Ruffians from Indiana and Missouri in particular caused problems, with one historian stating that "after the Missourians began to come, insecurity increased. In 1850 things had reached such a path that mail agents were afraid to carry gold, lest they should be murdered."

Disregard for life and property was engendered by the miner's lifestyle which included excessive drinking, carrying weapons day and night, and a sense of remoteness from civilization. It was literally each man for himself. It has been estimated that by 1854 there had been 4,200 murders, 1,400 suicides, and 10,000 other unfortunate deaths in the mining fields. Cholera, the hardship of winter, and accidents took an additional toll.

Vast quantities of gold were discovered in California. Bancroft estimates gold production at $10 million in 1848, $40 million in 1849, followed by $50 million in 1850, $60 million in 1851, $60 million in 1852, $65 million in 1853, $60 million in 1854, $55 million in 1855, and $56 million in 1856, for a total of $456 million. His figures were based upon a recorded export of $331 million of gold from the district plus his guesses of unregistered treasure and gold retained for local use. Other estimates have ranged from $250 million to $1 billion. The government publication *Historical Statistics of the United States* gives the following figures (in thousands of ounces) for total United States gold production during the period: 1846 55, 1847 43, 1848 484, 1849 1,935, 1850 2,419, 1851 2,661, 1852 2,902, 1853 3,144, 1854 2,902, 1855 2,661, and 1856 2,661. Prior to 1848 the figures were made up mainly of production from Georgia and North Carolina with small additions from Southern California.

The vast production of California gold created a demand for a standard medium of exchange. Gold in its raw form was of inconsistent value as metal from different areas contained different amounts of impurities. Scales were often inaccurate, sometimes deliberately so. Beginning in 1849 private firms issued gold coins using native metal. In 1851 Augustus Humbert, representing the United States government, set up official assay facilities and issued $50 octagonal gold "slugs" and other issues, but it was not until 1854

that a branch mint was opened in San Francisco.

Gold miners were a restless lot, and after the first year or two their attention often drifted toward other activities. Farming, ranching, shopkeeping, and other endeavors often proved to be more remunerative than gold digging. Still, the lure of easy wealth persisted, and when news of other discoveries arose, large numbers of miners left California for more promising territories. In 1852 and 1853 many journeyed to the newly-found gold fields in Australia. During the same decade, nearly 20,000 miners went North to British Columbia to seek gold near the Fraser River. In the autumn of 1854, gold was discovered on the Kern River in Southern California. Historian J. M. Guinn relates:

> Reports were spread abroad of the fabulous richness of the mines, and the rush was on. For a time it seemed as if the northern mines would be depopulated. From Stockton to the mines, a distance of 300 miles, for weeks the plains of the San Joaquin were literally speckled with honest miners on foot, on horseback, on stages, and in wagons bound for the mines. Every steamer down the coast came loaded with miners, merchants, gamblers, and adventurers of all kinds, bound for the new El Dorado via Los Angeles. The sleepy old metropolis of the cow counties awoke to find itself transformed into a hustling mining camp. Business in mining supplies was brisk and times were lively in other directions.

Other Southern California locations were exploited. Gold was discovered in the San Gabriel Canyon near Los Angeles, and many miners reported earning $6 to $10 per day. The San Feliciano Canyon site of the 1841 gold discoveries, was explored anew, and many worked the placer locations there with varying degrees of success.

In 1860 gold in commercial quantities was discovered in Idaho, and a rush of settlers resulted. Silver, lead, and zinc added to the treasure, and many towns sprung up overnight. The *Silver City Owyhee Avalanche*, May 22, 1875, discussed earlier discoveries in the Idaho district and noted that they were the "richest ever found. Men made $50 a day pounding up the Oro Fino [the name given to a rich ledge] rock in common hand mortars. It assayed $7,000 in silver and $800 in gold to the ton. A year afterward, when a larger quantity of ore had been tested by actual working, ten tons of rock were found to yield one ton of amalgam."

Certain parts in what is now the state of Oregon were also important in gold production, with the towns of Sumpter, Baker City, and others being scenes of intense activity around the turn of the century.

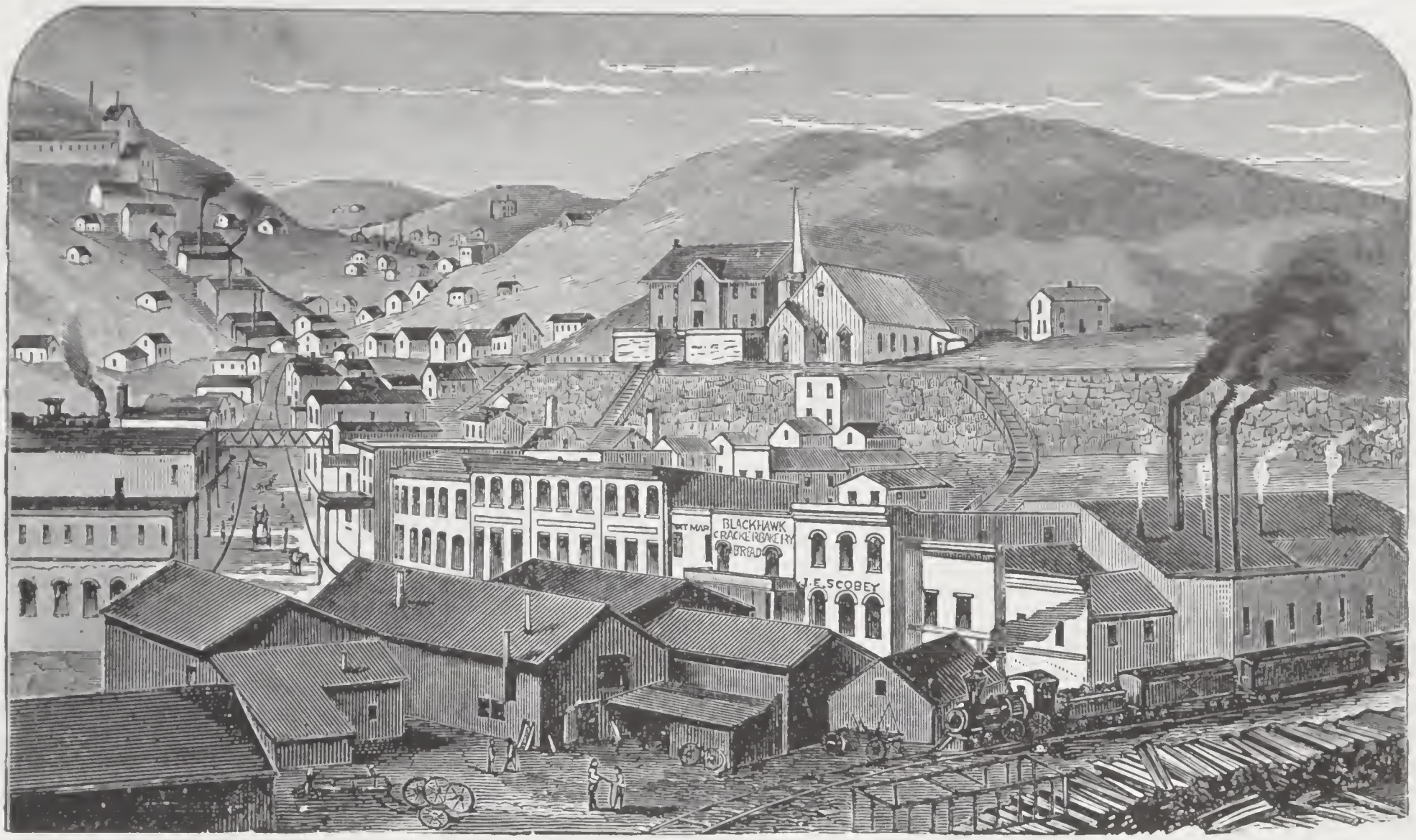
Precious metals played an important part in the development of Montana, Virginia City, at one time the capital of Montana, was bustling with people in 1880 (today it is a ghost town restored for the tourist trade) and had as much business as it could handle. In 1878 the largest bank in town transacted over $400,000 worth of business in gold bars and dust. Nearby, Alder Gulch yielded precious metal valued at $150,000,000 by the year 1885. One estimate placed the population of Virginia City, the top trading metropolis, at 10,000 during its peak activity.

Nevada, although best known for silver, produced large amounts of gold, beginning with discoveries made early in 1850 by Mormons who were en route to the California goldfields. By 1851 perhaps as many as 200 miners kept busy washing traces of gold from river bottom sand in the western part of the territory.

During the 1830s, hunters and trappers found small amounts of gold in the Territory of Colorado and exchanged the metal at a trading post located at the mouth of Clear Creek. During the 1840s and early 1850s there were numerous scattered discoveries of minor importance. The first find to create widespread interest occurred in 1858 when gold was found in quantity near the junction of Cherry Creek and the Platte River. It was reported that several hundred dollars worth of metal was obtained from one sandbar, and that another spot yielded $500 worth of gold. Word spread to the eastern states, and soon a smaller version of the California Gold Rush occurred, with wagons travelling westward bearing the oft-repeated slogan "Pikes Peak or bust." Within a short period of time Central City, Georgetown, and other communities arose in the mountains to the west of Denver. Gold and silver were found in large quantities, and thousands engaged in mining. Unlike the alluvial or placer deposits of California, much of the metal in Colorado was extracted from hard rock deep in the earth. The buildings of numerous mining companies dotted the landscape.

Sensing a commercial opportunity, the firm of Clark, Gruber & Co., bankers, minted $2 1/2, $5, $10, and $20 gold coins from native metal. Soon

Gold mining in Colorado, 1859, at the Gregory Gold diggings. In a smaller scale re-enactment of the California Gold Rush of a decade earlier, thousands of miners came into Colorado during the 1859 era and found productive digging in the foothills and mountains to the west of Denver. During the next few decades, until a price slump severely affected the industry in 1893, towns such as Central City, Idaho Springs, Silver Plume, Georgetown, Black Hawk, Creede, Aspen, Telluride, and Leadville produced untold millions of dollars worth of gold and silver. (New York Public Library Picture Collection)



Gregory Lode. Bobtail Mill.

BLACK HAWK.

An engraving of Black Hawk, Colorado, located near Central City to the west of Denver, circa 1879. Vast amounts of precious metal, gold and silver, were mined in Colorado during the latter part of the nineteenth century.

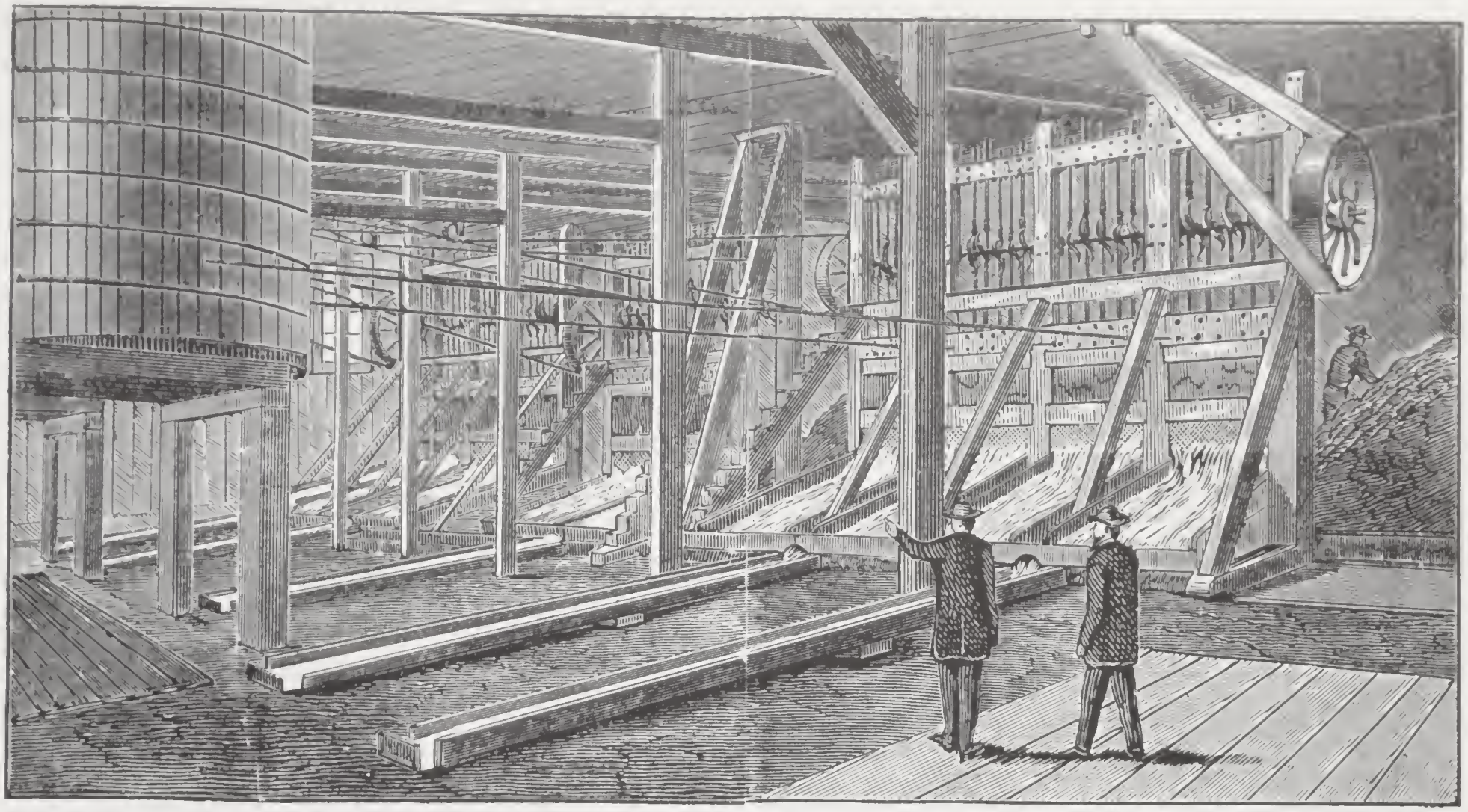
The figures of 1864–5 represent coin values as well as those of 1879. The greenback values paid at the former period were vastly higher. The left hand column represents the charges when the eastern company operations were most numerous and extensive and when the failures and suspensions began.

	1864–5.	1879.
Miners	$4 00 to $5 00	$2 00 to $2 50
Foreman	5 00 to 7 00	3 00 to 3 50
Laborers	3 50 to 5 00	2 00
Head masons	9 00 to 12 00	4 50
Other masons and helpers	5 00 to 7 00	3 50 to 4 00
Carpenters	5 00 to 6 00	3 50 to 3 75
Flour, per sack of 100 pounds	12 00 to 19 00	2 25 to 2 50
Lumber, per M	40 00 to 46 00	23 00 to 25 00
Hay, per ton	50 00 to 70 00	23 00 to 25 00
Powder	6 00 to 9 00	3 65
Fuse, per M	15 00 to 23 00	6 50
Candles, per box	10 00 to 15 00	6 25
Rope, per pound	30 to 45	15
Quicksilver	1 10 to 1 60	48 to 50
Machine Oils	80 to 1 30	35 to 40
Sheet Copper, per pound	60 to 75	30 to 32
Iron, per pound	18 to 24	4½ to 5
Sheet Iron, per pound	17 to 24	4 to 5
Nails, per pound	16 to 22	5
Shovels, each	1 80 to 2 35	1 10 to 1 40
Wood, per cord	8 00 to 12 00	5 50
Milling Ore, per cord	35 00 to 50 00	20 00 or less.

There were times when the prices of labor and some supplies varied greatly. Wood and timber is dearer in Central City than anywhere else in the mountains. In Gold Dirt, near Black Hawk, at Caribou, Ward, Leadville, Ten Mile, and all of the southern and western counties, wood usually sells at from $2.50 to $3.00 a cord. Lumber sells in the same localities at from $30 to $35 per thousand feet. Carpenters and mechanics at Leadville have been getting ten or fifteen per cent. more than the figures given in the table, and lumber has been higher there. This is due to the wonderfully rapid growth of the place.

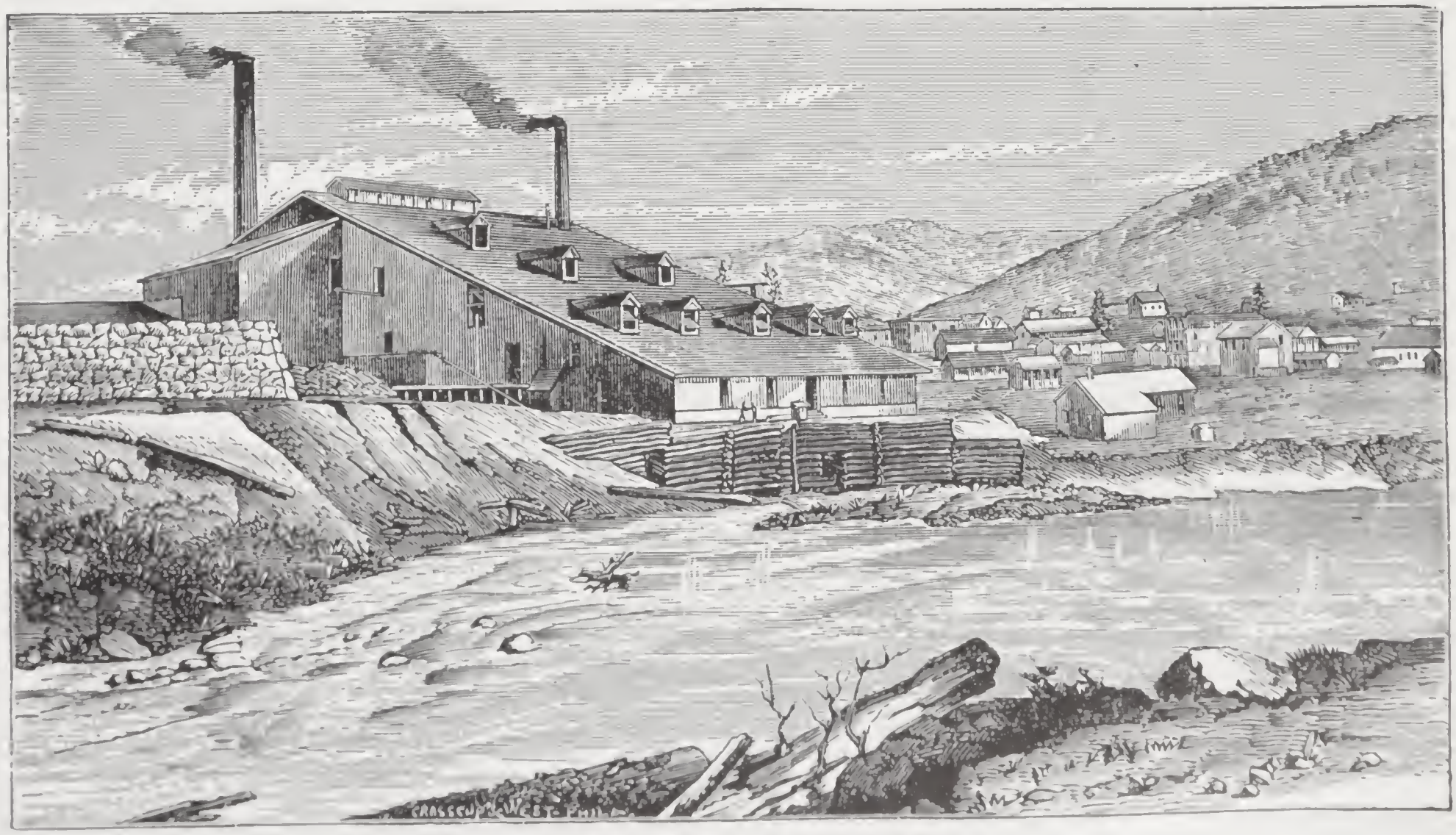
There has never been a time or locality more favorable for individual or company investments and organizations than this year of

A page from a text on mines and mining, 1879, gives prices at the time in Colorado. Following gold discoveries in the Denver area, 1858-1859, thousands of people poured into the district from other areas. Prices rose sharply. By 1879 prices had declined considerably. Note the top line of the text which observes that the figure given for 1864-1865 are for "coin" values; at the time paper money sold at a sharp discount, and during one period it took $25 worth of greenbacks to purchase a $10 gold piece.



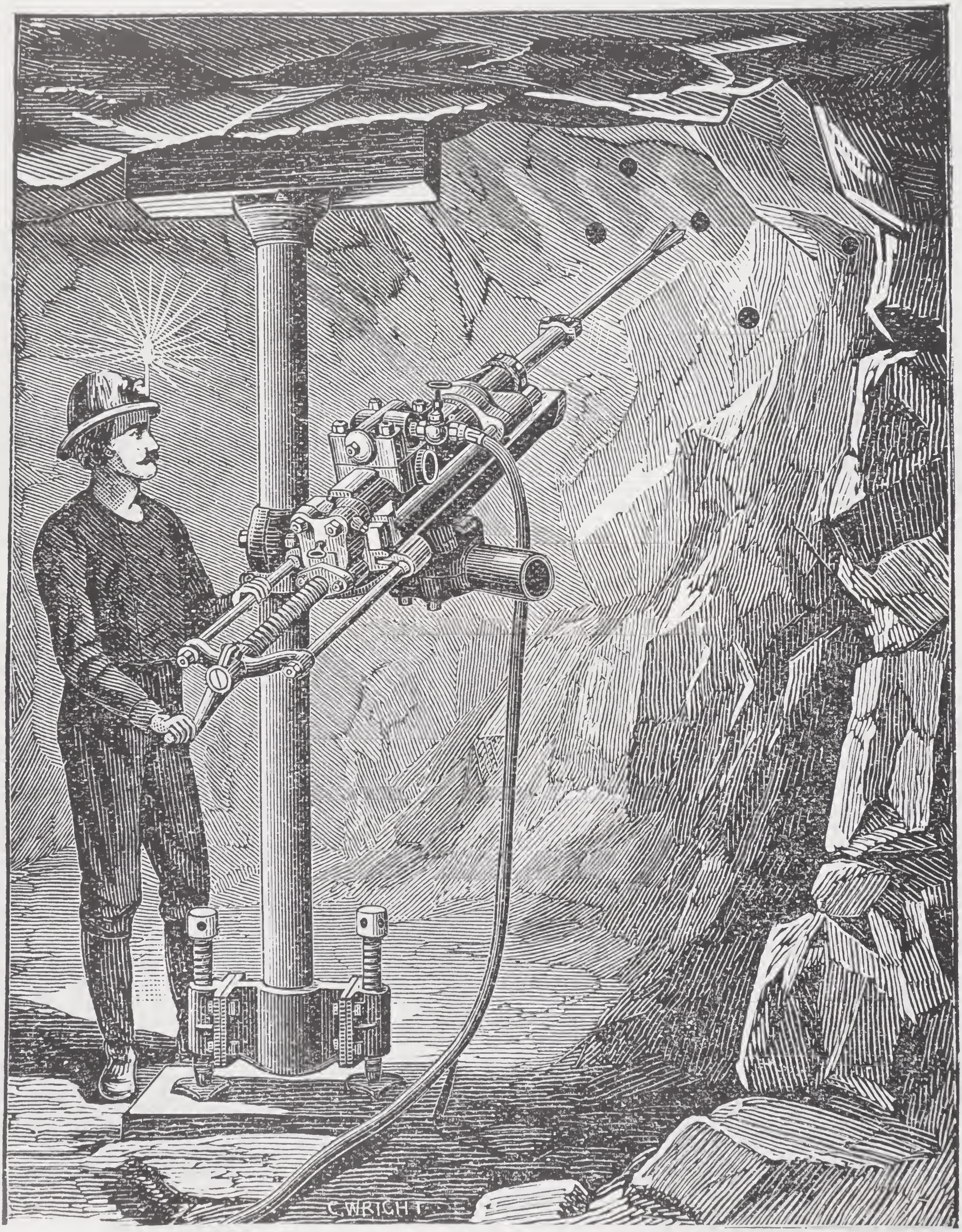
THE MONMOUTH-KANSAS GOLD MILL.

Gold processing mill, Colorado, circa 1879.



CARIBOU MILL AT NEDERLAND.

The Caribou Mill at Nederland, in the hills above Boulder, Colorado processed gold ore in the 1870s. Nearby the town of Gold Hill was called "the richest square mile on earth."



An Ingersoll air-driven rock drill in use deep underground in a gold mine. Such a drill was anchored in place by means of an adjustable column. Pressure was applied by means of turning a screw, and the rotating bit, powered by an air compressor, quickly drilled holes for dynamite into the surrounding rock walls.

emphasis shifted to silver, which was found in larger quantities, and during the next two decades vast stores of silver metal were taken from the earth. Further to the west, Leadville became a thriving commercial center. The financial depression of 1893 saw a drop in silver demand, with the result that many miners were put out of work. By fortuitous happenstance, just a couple of years earlier a gold strike had been found in the mountains near Colorado Springs, on the western slope of Pikes Peak. Named Cripple Creek, possibly from a cow which had injured itself while crossing a stream, the community, together with nearby Victor, began producing gold in quantities which would eventually rival the treasures of the California Gold Rush.

In 1895 the Cripple Creek district was in its beginning days. A large influx of miners, including many unemployed from the Denver area, had arrived, setting the stage for a population that would eventually reach 60,000. Like other gold discoveries, Cripple Creek caused worldwide excitement. The lure of the place was related in an article in the San Francisco *Call*, December 25, 1895:

CRIPPLE CREEK'S BOOM:

H. W. Preston, treasurer of the town of Victor, one of the principal camps of the Cripple Creek district, is at the Grand Hotel [while visiting San Francisco] . . . He thinks Cripple Creek is the greatest gold country on earth. In speaking of it he said:

"There is nothing like it anywhere, and it is getting better all the time. You can't miss it here, no matter what you take hold of. There is money in everything. The district is spreading, too. Some 10 miles below Victor, at an altitude 2,500 feet lower, is a new camp called Marigold, where some good gold discoveries have just been made. Cripple Creek discoveries promise now to extend for probably 75 miles, reaching close up to Canyon City.

"I have been in Cripple Creek now two years, and I am called an old timer; but I am entitled to that appellation, because I have been in Colorado since 1872.

"Seven railroad trains arrive every day in Cripple Creek, each loaded down with passengers from various parts of the country. Besides this there are many freight trains. The two roads now completed cannot do its business and two more are about to be built — one a short line from Denver and the other a direct line from Colorado Springs. W. S. Stratton, the millionaire owner of the Independence Mine, has subscribed half of the $1 million necessary for the line from Colorado Springs. It is to be 28 miles long. Denver's idea in building another road is in order that she may hold the business.

"The Independence Mine which Stratton owns has so much gold in it that he can get out a half a million dollars worth any time and not feel it. In fact he has more gold than he knows what to do with, and he is not in a hurry to get it out. It is said that he has been offered $10 million for the mine, but he won't sell it, no matter what he is offered . . . A couple of years ago Stratton was a carpenter at Colorado Springs and never dreamed of having so much money . . .

"There are now close to 40,000 people in Cripple Creek, and in six months I cannot doubt that there will be 100,000. People are arriving as fast as they can. It is impossible to take care of them. There are not hotels enough. Often men pay $1 apiece for the privilege of sitting in chairs during the night.

"Cripple Creek was developed with some home capital, but now many eastern and foreign moneyed men are arriving and investing. We have 130 producing mines, and there are 11,000 locations in a region about six miles by 12 miles in extent. The country all over this region is all located, and if a man wants a claim in it he must buy it. But there is good territory contiguous to it, especially below Victor . . .

"The stock excitement continues and has grown into a craze, especially at Colorado Springs. A new stock exchange has been started at Victor, and another is being started at Cripple Creek. Two years ago there were six houses in Victor. Now there are 6,000, and it is one of a chain of camps. All the camps have churches, water works, and electric lights. They also have plenty of gambling houses and all the adjuncts of live mining camps. There is little killing, however. In fact, I believe nobody has been killed since August . . ."

Apparently the coverage of Cripple Creek proved popular with readers in San Francisco, for four days later the *Call* had another article, excerpted herewith:

Cripple Creek, Colorado is the most wonderful gold camp in America and probably in the world. It is actually producing $1 million per month in gold, while five years ago there was no such place upon the map of Colorado.

It is hard to believe the most conservative and reliable statements about the wonderful gold camp. For instance, the post office department at Cripple Creek shows by its last quarterly report that it is handling more letters, money packages, and registered letters and doing a larger business than any post office in the state outside of Denver, while the monthly reports of the last three months of the Colorado Telephone Company show that Cripple Creek is doing the largest business in the state with the exception of Denver. It is difficult for anyone who has not been to Cripple Creek to realize that these two statements are true . . . Rooms are being engaged weeks in advance. Blankets, cots, and beds are at a premium nightly. Everything is run wide open. Gambling of every kind and nature is not hidden or obstructed from the view of the passerby. Dance halls, saloons and gambling

houses, and variety theaters are reaping a harvest such as never before in the west, with the possible exception of the early days of Leadville.

With a drop [in price] of silver the habitues of the dance halls, the typical dance hall girls of the mining camps, and the oily gamblers who infest mining camps left Creede, Leadville, and Aspen for a more suitable place to ply their wiles and bunko the weak and unweary in Cripple Creek. Dot Ford, the wife of the late Bob Ford, the murderer of Jesse James, and who himself was murdered in Creede, is advertised as one of the attractions of a leading dance hall, while "Slanting Annie," one of the most notorious and at the same time popular dance hall managers, advertises that she would like to meet all of her old-time Creede friends. "Slanting Annie" was given notoriety and celebrity while at Creede by a poem written by Cy Warman in the New York *Sun*.

As one walks up any of the leading streets of Cripple Creek it is impossible to proceed more than a block without hearing the rattling roll of the ivory ball of the roulette wheel and the indifferent call "17 on the black, low, black and odd," or "32 on the red, high, red and even." I stood the other evening as the Salvation Army, which is composed of at least 60 members, knelt down in the dust in front of one of the leading gambling house and dance houses, and between the slow sentences of the prayer of the leader I could distinctly hear the merry laughter around the gambling tables, the curses of the losers and the careless call of the dealer.

In Cripple Creek alone there are 59 saloons, five dance halls, and three variety theaters, while in the evening three brass bands and the Salvation Army vie with each other to obtain the most attention and draw the largest crowd, the bands playing in front of the respective theaters and the Salvation Army band in front of a large tent. To do justice to Cripple Creek I must add that there are also eight churches in the town, nearly every denomination being represented, and that as a rule Cripple Creek is peaceful and orderly.

There are 154 regularly-shipping mines in the district, while W. S. Stratton, James M. Doyle, James F. Burns, John Harnan, Irving Howbert, Eben Smith, Bertrand Brothers, J. N. Cone, David H. Moffat, and others have made from a million to $20 million in Cripple Creek in the last few years, while a number of smaller fortunes which may have been made, and, I may as well add, lost, have been very numerous. The whole of Colorado seems to have gone wild and crazy with Cripple Creek mining stock speculation. It is true that up to the 1st of December nine tenths of the entire list of Cripple Creek stocks have doubled, tripled, or quadrupled. It is also true that nearly nine tenths of the stock companies formed since that time are selling above their real and intrinsic value, while there are many stock companies whose only property exists upon paper. There are more than 500 companies incorporated for the ostensible purpose of conducting operations in the Cripple Creek district. Of these, fully a half have made no serious attempt to develop their ground, and many have hardly a show of title to the claims they profess to own.

Around the same time the mayor of Cripple Creek predicted his town's future:

> Not one century nor five centuries will see the Cripple Creek mines exhausted. Our greatest, our richest and largest mines will be found in the granite, and the grandchildren of our children's children will not see the end of gold mining in the hills that built the Cripple Creek district.
>
> A century from now will see Cripple Creek the metropolis of a great mining district, extending 25 miles north and south and ten miles east and west, with blocks of magnificent brick and stone fronts lining its thoroughfares, with palatial and royally furnished residences dotting its suburbs, with splendid electric streetcar systems, with its gorgeous electric lights . . . with its lofty church spires lifting into the blue ether of our mountains — with its 500 mills grinding and pounding away upon the daily product of the mines, and finally with its quarter of a million energetic, progressive, and law abiding people . . .

Unfortunately for posterity, the palatial mansions never materialized, and after a decade of prosperity, the fortunes of the Cripple Creek district declined. Far from having a quarter million people or anything close to it, the 1980 census showed that fewer than 1,000 inhabited the Cripple Creek district. Today scattered mine tailings, numerous derelict buildings, abandoned mine shafts, and a small tourist trade, particularly in the summertime, serve to mark what was once known as the world's greatest gold camp.

Statistics, often sketchy and based upon inaccurate estimates, are difficult to compare, but numerous historians have suggested that the output from the Cripple Creek district during its heyday rivaled the production of California's gold rush years. The vast outpouring of mineral wealth from the district was largely responsible for the opening of the Denver Mint in 1906.

Around the turn of the century, gold coin production increased tremendously, with vast amounts of bullion converted to $20 double eagles, a denomination first introduced into circulation in 1850. In earlier times there was a widespread fear of paper money, causing merchants, citizens, and others to demand "hard money" or coins in payment for various transactions. By the 1880s such fears had largely subsided, and gold coins were seldom seen in circula-

In April 1896 Cripple Creek, located in the heart of what has been described as "the world's greatest gold camp," was ravaged by two disastrous fires which leveled most of the downtown business section. Like the mythical phoenix bird, Cripple Creek rose from its ashes to become stronger than ever. The pictures shown here, from "Harper's Weekly," issue of February 13, 1897, show the rebirth of the town. Above is a view of the main thoroughfare, Bennett Ave., during the process of reconstruction. The side of the large National Hotel is shown to the right.

The National Hotel under construction on Bennett Ave. Rising four stories, plus penthouse facilities, the structure was the largest and most lavish place of public accommodation in the district. It flourished for two decades and then was torn down to avoid paying real estate taxes. By this time Cripple Creek, which once claimed nearly 60,000 residents, had dwindled to a shadow of its former self. Today (1982) fewer than 1,000 inhabit the area.

1897 view of business structures on the south side of Bennett Ave. at the corner of Third Street. While many of the structures in Cripple Creek have long since been demolished, today (1982) nearly all of the buildings shown in this photograph still stand. Cripple Creek's main activity is "mining gold" from tourists' pockets, although sporadic efforts are continually being made to revive the district's gold mines.

The Bimetallic Bank in Cripple Creek at the corner of Bennett Ave. and Second Street. A block away was famed Myers Ave., home of Cripple Creek's red light district.

tion. The large quantities minted were saved in Treasury or bank vaults or were earmarked for foreign currency settlements. This concept was furthered by the so-called gold standard system, which the United States adopted in 1900, being one of the last developed nations to do so.

The gold standard system had its origin centuries earlier when financial institutions and goldsmiths who held precious metal for various clients issued receipts to owners. Gradually it became the practice to exchange these receipts rather than to handle gold metal itself, with its attendant security risks and shipping difficulties. The promise of redemption was always present, so if the holder of a receipt wanted gold metal it could be easily obtained.

Soon certain banks and others found they could issue more receipts or notes — actually, paper money — than actual gold stored in the vault, with the expectation that not all notes would be redeemed at the same time. In practice such notes usually would not be redeemed as long as the issuing institution maintained the good faith of its clients. Occasionally there was trouble, however, and history is dotted with instances of bankruptcies and failures based upon the optimistic issuance of notes which the holders falsely believed were fully backed by gold or silver.

In 1821 England became the first country to adopt the gold standard whereby paper money issued by the government was backed by gold metal. Legal restrictions prevented the issuance of more paper money than there was gold backing for it. This in theory protected citizens from so-called "printing press inflation." By the late nineteenth century most nations active in the financial community had joined the gold standard system, with the United States finally adopting it in 1900, as noted.

The gold standard facilitated international exchange. Rather than make expensive and cumbersome shipments of gold coins and bullion, countries simply exchanged currency or certificates. Coins were stored in central vaults and were seldom moved.

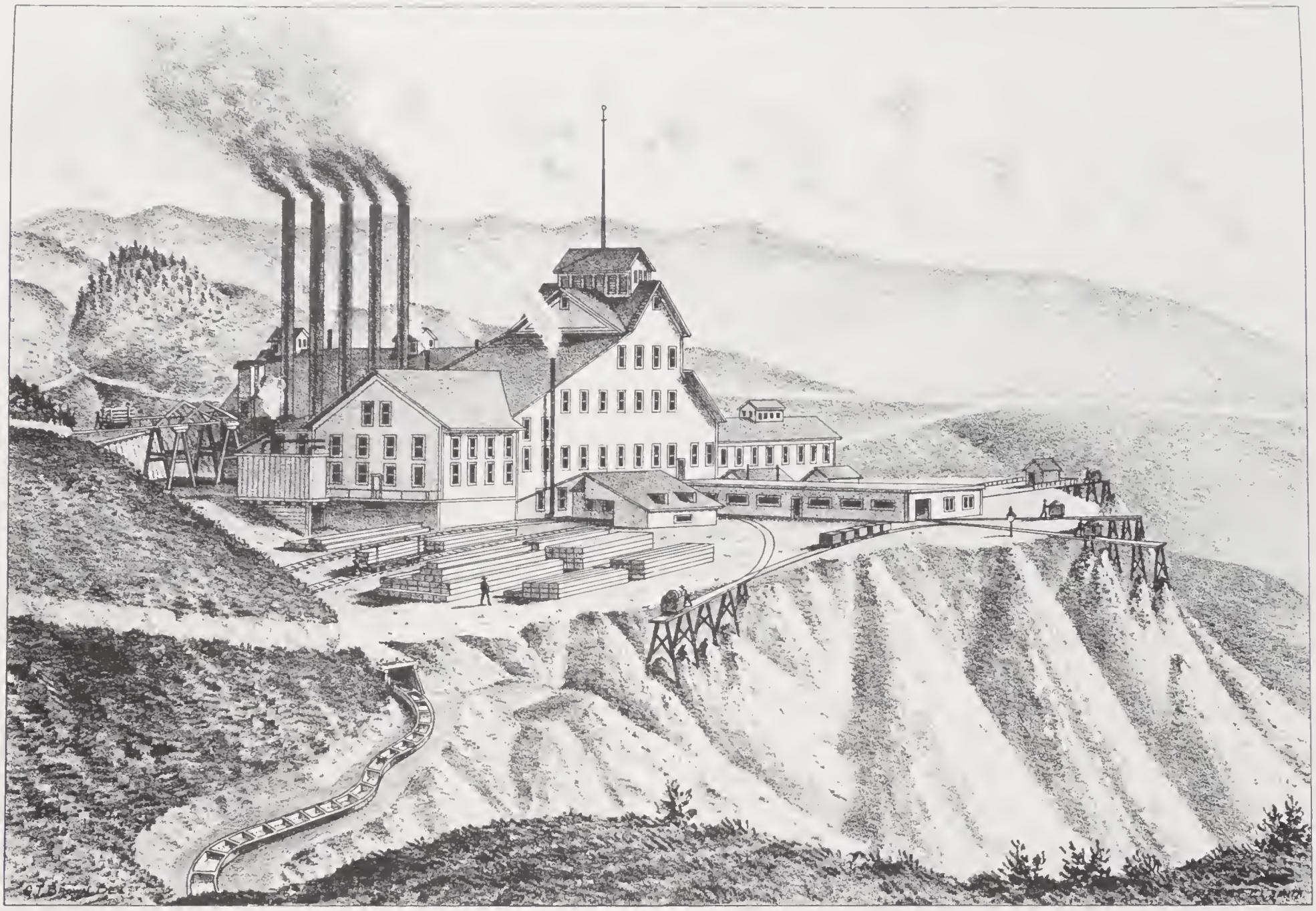
World War I saw a tremendous expansion of currency, particularly on the part of European nations involved in the conflict. The gold backing became insignificant compared to the currency in circulation, and the gold standard was discontinued. Hyperinflation took place in several areas, particularly in Germany in the 1920s, where, as a popular illustration showed, it took a wheelbarrow full of paper money to buy a loaf of bread.

In 1925 many nations returned to the gold standard in an effort to stabilize and reform the international currency situation. The general economic inflation of the late 1920s caused pressures, and finally the stock market debacle in 1929 spelled the end of the system. In 1931 England left the gold standard, in 1934 it was abandoned by the United States.

During the early twentieth century gold production continued at a record pace, according to government statistics. The output from hundreds of different enterprises in Colorado, Arizona, Idaho, Montana, and elsewhere, plus improved refining and extraction methods, caused a steady influx of gold bullion to the government. The discoveries in Alaska and the Yukon during the 1890s, the Klondike fever, added to the supply.

As it was more convenient to coin a given amount of gold in a double eagle than the same amount in two $10 pieces or four $5 pieces, the double eagle was coined in the largest quantities during this time. Not needed in the channels of everyday commerce, gold coins went to Treasury vaults, overseas to central banks, and were otherwise stored as security for transactions or backing for paper money. Although gold dollars were made from 1849 through 1889, the smallest denomination being minted in the late 1920s was the $2.50 quarter eagle. At that time the Treasury Department requested that Congress discontinue the $2.50, noting in part that it was "a coin that is not used or required in commerce nor is it in general circulation, and is easily confused with the new one-cent piece." The Mint Act of April 11, 1930, stated that "hereafter the $2.50 gold piece shall not be coined or issued by the Treasury." Quarter eagle coinage had already been discontinued. The last pieces were struck in 1929.

From 1929 onward, the economic situation in the United States deteriorated, creating what became known as the Great Depression. Unemployment increased, factory production decreased, and many banks, securities firms, and others became bankrupt. By the inauguration of Franklin D. Roosevelt in 1933 there was widespread concern for the security of the



Facilities of the Yellow Jacket Silver Mining Co., Gold Hill, Nevada, circa 1880. The vast Comstock Lode and the surrounding area yielded large amounts of silver (primarily) and gold and were responsible for much of the early growth of the state.

The Blue Eyes Mine, Last Chance mining district, Foresthill Divide, Placer County, California 1882. By this time mining in streambeds had retrieved most of the really available gold, and most activities were of the hard rock type employing tunnels and shafts to extract gold-bearing quartz, which was then pulverized in a stamp mill.

American monetary system. On April 5, 1933, the new president proclaimed that gold coins were to be returned by the public to the Federal Reserve System by May 1st, with the exception of pieces of numismatic value. Citizens were prohibited from holding gold except for:

> Such amounts of gold as may be required for legitimate and customary use in industry, professions or art within a reasonable time, including gold prior to refining and stocks of gold in reasonable amounts for the usual trade requirements of owners mining and refining such gold. Gold coins and gold certificates in amount not exceeding in the aggregate of $100 belonging to any one person; and *gold coins having a recognized special value to collectors of rare and unusual coins . . .*

On December 28, 1933, the order was revised slightly, and, among other provisions, the statement allowing individuals to hold up to $100 worth of gold coins or gold certificates (in addition to pieces having recognized numismatic value) was deleted, after which time only numismatic pieces could be legally held. In the same year the government issued several notices to the effect that the United States would remain on the gold standard and that citizens should not be alarmed.

The Gold Reserve Act of January 30, 1934, provided that:

> No gold shall thereafter be coined, no gold coin shall hereafter be paid out or delivered by the United States . . . All gold coin of the United States shall be withdrawn from circulation, and together with all other gold owned by the United States, shall be formed into bars of such weights and degrees of fineness as the secretary of the Treasury may direct.

This legislation effectively ended gold coinage production and removed the gold backing of paper money.

1933 was a year of transition for American gold coinage. In January 50,000 $10 pieces bearing the 1933 date were minted, 200,000 additional pieces were minted in February, and 62,500 were struck in March. Of the 1933-dated $20 piece, 100,000 pieces were struck in March, 200,000 in April, and 145,500 in May. As the Roosevelt proclamation was made on April 5, 1933, it is reasonable to conclude that anyone visiting the Treasury Department in March of the same year could have legally acquired a double eagle bearing that date. However, in later years the Treasury Department took the strong position that 1933 $10 pieces can be legally held by collectors, but that 1933-dated $20 pieces were illegal to own and were subject to confiscation, as indeed happened on several occasions.

Desiring to store the bulk of its gold in a central location, the government began construction in 1936 of a repository at Fort Knox, Kentucky. The structure, made of granite, steel, and concrete, presently houses most government gold.

On July 13, 1954, Secretary of the Treasury George M. Humphrey revised the regulations relating to gold holding and stated that citizens could own "gold coin having a recognized special value to collectors of rare and unusual coin, including *all* gold coin made prior to April 5, 1933." (Presumably, this would include examples from the 100,000 1933-dated double eagles struck in March, 1933.) Referring to coins struck in other countries, the order noted that "gold coin made subsequent to April 5, 1933, is presumed not to be of recognized special value to collectors of rare and unusual coin." Later, exceptions were made for certain limited editions produced by foreign governments, such as 1937 gold coins struck in England to observe the coronation of King George VI. Until gold holding by the public was made possible on an unlimited and unrestricted basis on December 31, 1974, special permits had to be obtained from the government when gold coins of any kind, including United States issues dated prior to 1933, were imported.

The following chapters delineate the establishment of the various United States branch mints (several of which were instituted specifically to produce gold coins), the rise of gold coin collecting, and the various denominations produced.

Today, remaining American gold coins serve as a reminder of the days when a dollar was not only a dollar but was a dollar made of gold, an era in which our paper money was backed by something more than changing promises. On gold coins are to be found triumphs of the engraver's skill, the work of Gardner, Reich, Kneass, Gobrecht, Longacre, Pratt, and others, with the landmark efforts of Augustus Saint-Gaudens and the personal intervention of President Theodore Roosevelt representing a unique story in American monetary history. Among American gold coinage are to be found many common issues, 1904 and 1928 double eagles, for example, as well as pieces so elusive that even the National Coin Collection in the Smithsonian In-

stitution does not possess a specimen, the 1870-S $3 for example.

Coins which survived the 1933-1934 proclamations are today considered to be the jewels in the tiara of American numismatics and are lovingly preserved, studied, admired, and appreciated.

The main thoroughfare of Dawson in the Klondike Gold District, 1898. Like other gold rushes, the Klondike had its share of treasure, adventure, and romance. But, unlike most earlier scrambles for the precious metal, the Klondike activities were covered in detail by American publications and periodicals which dispatched writers, Jack London for one, to cover the events.

Dawson had some of the comforts of back home, including electricity, businesses offering just about every service imaginable, and even nickel-in-the-slot pianos in saloons. Vast amounts of gold were extracted from the district during the closing years of the nineteenth century.

Gold mining in 1876 at Placer Claim No. 1, Blacktail Gulch, South Dakota. Photographed by Silas Melander. (New York Public Library Picture Collection)

Mints and Minting

2

During the early years of the American government federal needs were supplied by contractors, whether the items were munitions, paper money, supplies, or whatever. Although earlier recommendations had been made to establish a mint, nothing tangible resulted until 1792, when facilities for this purpose were acquired in Philadelphia. In 1787 Congress authorized the issuance of copper pieces, known today as Fugio cents, but these were coined under contract by James Jarvis, an entrepreneur.

During the eighteenth century numerous private mints operated along the Atlantic seaboard. Near Rupert, Vermont, Reuben Harmon, Jr. produced copper pieces for the Green Mountain state in 1785 and 1786, later transferring his operation to Machin's Mill located on the shore of Orange Pond near present-day Newburgh, New York. The Machin enterprise subsequently became very active, also producing pieces bearing devices relating to Connecticut, New York, and elsewhere, as well as counterfeit British and Irish coins. In New Jersey, coins bearing the imprint of that state and dated from 1786 to 1788 were produced by private mints in Elizabethtown, Morristown, and Rahway. Likewise, in Connecticut enterprising individuals produced coins under the authority of that state.

Massachusetts has a rich coinage history dating back to 1652 when the General Court established a mint and appointed John Hull as mintmaster. Silver pieces were produced for the next 30 years, resulting in numerous disagreements with British authorities who neither sanctioned nor approved of the coinage. Over a century later Massachusetts established another mint to coin copper cents and half cents, but after an audit revealed that each piece cost twice face value to produce, the venture was discontinued.

Other minting facilities included those of Standish Barry, a Baltimore silversmith who produced his own silver threepence pieces in 1790; Dr. Samuel Higley, who owned a copper mine near Granby, Connecticut, and who produced copper threepence pieces circa 1737; and John Chalmers, an Annapolis (Maryland) jeweler who produced silver threepence, sixpence, and shilling pieces dated 1783. So far as is known, the only private minter to produce gold coins during the early years was Ephraim Brasher, a New York jeweler and goldsmith, who produced 1787-dated gold doubloons and who is believed to have also issued a 1742-dated gold coin (produced circa 1787).

Even after the establishment of the Philadelphia Mint, private mints continued to fill special needs from time to time. During the 1830s the so-called Hard Times tokens, mainly the size of large cents, were produced to fill the need for circulating coinage. Likewise, during the Civil War, when citizens hoarded all regular American coinage, private issuers distributed millions of cent-sized tokens which served well in the channels of commerce. Gold discoveries in Georgia, North Carolina, California, and Colorado spurred the opening of private mints, some of which produced coins in large quantities.

From its beginning in Philadelphia in 1792, the federal minting facilities expanded to eventually include seven different institutions. The present chapter gives the story of these mints, with emphasis on the gold coins they produced.

The Philadelphia Mint

Prior to the establishment of a mint at Philadelphia by congressional decree, there was much discussion by the founders of our nation relating to the development of a standardized coinage. The period before 1792 saw a myriad of diverse pieces in circulation, including gold coins from France, Portugal, Spain, England, Mexico, Holland, Peru, and elsewhere. Among the larger gold coins, the eight escudo piece, the gold doubloon of pirate fame, was perhaps the best known and was equivalent to 16 American dollars. Among lower denominations, British shillings and halfpence, French francs, Dutch guilders, Spanish milled dollars and fractional counterparts, and others were common in circulation, indeed remaining legal tender until 1857. Although the Philadelphia Mint began operations in 1792 and produced coins for circulation beginning in 1793, it was many years until the quantity produced was sufficient to meet all the needs of commerce.

During the early days the proliferation of foreign coins made transactions among banks, merchants, and individuals difficult as many pieces were of uncertain value and authenticity. Compounding the problem were exchange rates which varied from state to state. A Spanish milled dollar might trade at one value in Trenton, New Jersey, and an entirely different value in New Haven, Connecticut. From time to time certain state legislatures mandated exchange rates, but such posted schedules usually did not remain in effect for long for then, as now, worldwide monetary systems were in a state of flux.

On January 15, 1782, Robert Morris, superintendent of finance, proposed a standardized currency system and suggested that a federal mint produce coinage. Although his system was complicated and was never adopted, it served to stimulate congressional and legislative leaders to do something about the situation. Morris wrote to Congress:

> The necessary machinery of a mint can be easily made and there are persons who can perform the whole business. If Congress is of the opinion with me that it will be proper to coin money I will immediately obey their orders and establish a mint. And I think I can say that no better moment could be chosen for the purpose than the present.

It was not until 1784 that Congress asked Morris to make "an estimate of the expense which will attend the establishment of the mint"; however, nothing more was done at the time.

That Congress was interested in developing a standardized coinage system is evidenced by a plan approved by that body on July 6, 1785. It was decided that the dollar would represent the monetary unit of the United States and that the manufacture of coinage would be based on the decimal system. The dollar was a familiar unit, for the Spanish milled dollar served as the standard for many private and public transactions at the time. Indeed, Continental Congress specified that paper money of the United States (issued during Revolutionary War times prior to the advent of coinage) be payable in Spanish milled dollars.

In 1786 Congress solicited proposals for the establishment of a mint. However, once again Congress took no substantive action because the legislatures were divided as to the necessity of actually having to build a mint. During this period, however, additional proposals for a standardized coinage system were forthcoming, with the gold eagle ($10), half eagle ($5), silver dollar, half dollar, double dime, dime, copper cent, and mill being suggested.

On April 15, 1790, Congress directed Secretary of the Treasury Alexander Hamilton to "prepare and report . . . a proper place . . . for the establishment of a national mint." During this period both Thomas Jefferson and Hamilton were separately working on proposals to establish a system of weights and measures related to gold and silver, a system which would, in effect, lead to the development of a unified coinage based on the decimal system.

Finally, Congress resolved on March 3, 1791, "that a mint shall be established under such regulations as shall be directed by law." President George Washington approved, thus laying the groundwork for an official federal coinage.

The Mint Act of April 2, 1792, was a landmark in coinage legislation and provided for the establishment and regulation of the mint, a system of weights and measures related to gold, silver, and copper coinage, and set forth many other regulations pertaining to the coinage of money. The Mint Act stated, in part:

> Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, and it is hereby enacted and declared, that

a Mint for the purpose of a national coinage be, and at the same time is established; to be situated and carried on at the seat of the Government of the United States, for the time being: And that for the well conducting of the business of the said Mint, there shall be the following officers and persons, namely, a director, an assayer, a chief coiner, an engraver, a treasurer . . .

And be it further enacted that, upon the said coins respectively, there shall be the following devices and legends, namely: upon one side of each of the said coins there shall be an impression emblematic of liberty, with the inscription of the word Liberty, and the year of the coinage; and upon the reverse of each of the gold and silver coins there shall be the figure or representation of an eagle, with this inscription, "UNITED STATES OF AMERICA" and upon the reverse of each of the copper coins there shall be an inscription which shall express the denomination of the piece, namely cent or half-cent, as the case may require.

And be it further enacted, that the proportional value of gold to silver in all coins which shall by law be current as money within the United States, shall be as fifteen to one, according to quantity in weight, of pure gold or pure silver; that is to say, every fifteen pounds weight of pure silver shall be equal value in all payments with one pound weight of pure gold, and so in proportion as to any greater or lesser quantities of the respective metals.

And be it further enacted, that the standard for all gold coins of the United States shall be eleven parts fine to one part alloy; and accordingly that eleven parts in twelve of the entire weight of each of the said coins shall consist of pure gold, and the remaining one twelfth part of alloy; and the said alloy shall be composed of silver and copper, in such proportions not including one half silver as shall be found convenient; to be regulated by the director of the mint, for the time being, with the approbation of the President of the United States, until further provisions shall be made by law . . .

And be it further enacted, that it shall be lawful for any person or persons to bring to the said mint gold and silver bullion, in order to there being coined; in that the bullion so brought shall be there assayed and coined as speedily as may be after the receipt thereof, and that free of expense to the person or persons by whom the same shall have been brought.

Further, the Mint Act stipulated that the following denominations be manufactured in the appropriate weights and metals as defined:

Metal	Denomination	Value	Weight in Grains		Fineness
			Fine	Standard	
Gold	Eagle	$10	247 1/2	270	.916 2/3
	Half Eagle	$5	123 3/4	135	.916 2/3
	Quarter Eagle	$2½	61 7/8	67.5	.916 2/3
Silver	Dollar or Unit	$1	371 1/4	416	.892 2/5
	Half Dollar	50c	185 5/8	208	.892 2/5
	Quarter Dollar	25c	92 13/16	104	.892 2/5
	Disme	10c	37 1/8	41 3/5	.892 2/5
	Half Disme	5c	18 9/16	20 4/5	.892 2/5
Copper	Cent	1c	264	264	1.000
	Half Cent	½c	132	132	1.000

Following the production of pattern coins in 1792, pieces were first minted for circulation in 1793, in which year cents and half cents were struck. Silver coinage made its debut in 1794. The first gold coins, the subject of the present text, were produced in 1795 and consisted of the half eagle and eagle denominations. The following year, 1796, saw the striking of quarter eagles.

On April 12, 1792, President George Washington appointed David Rittenhouse as the first director of the Mint. As a scientist, mathematician, and philosopher Rittenhouse was highly regarded by his peers. On June 9th, Thomas Jefferson wrote to Washington concerning property suitable for the Mint:

Mr. R. thinks the house on 7th Street can be bought for 1,600 pounds. It is probable that none can be rented under 150 pounds and this sum will pay the interest and sink the principal of 1,600 pounds in 15 years . . . on the whole Thomas J. concurs in opinion with Mr. R. that it will be better to buy this house.

Washington wrote to Rittenhouse concerning the matter on July 9th:

I hereby declare my approbation to the purchase he had made of the house and the lot for the Mint . . . and I leave to his discretion to have such alterations and additions made to the building purchase, as he shall find necessary.

Refurbishing of the existing premises plus new construction was completed on September 9, 1792, with employees beginning work later that

month, according to Frank Stewart, who studied the history of the Philadelphia Mint and who around the turn of the twentieth century owned the original Mint buildings.

Bond requirements of $10,000 each were required before production of gold and silver coins could commence at the Mint, as provided by a stipulation in the Mint Act of April, 1792. These bonds were necessary for the assayer, chief coiner, and treasurer "for the faithful and diligent performance of the duties of his office." Since this stipulation remained unfulfilled in the early days after the Mint opened, silver coin production did not take place until October 15, 1794, when 1,758 silver dollars were coined, followed by a production of half dollars to the extent of 5,300 pieces on December 1. Although half dimes dated 1794 were made, no pieces of this denomination were struck until 1795, at which time earlier-prepared 1794-dated dies were used.

Under the provision of the Mint Act which noted that "the assayer shall receive and give receipts for all metals which may be lawfully brought to the Mint, shall assay such of them as may require it, and shall deliver them to the chief coiner to be coined," various individuals, merchants, banks, and others deposited an array of silver and gold coins, bullion, and manufactured articles at the Mint.

The first gold bullion received at the Mint was from Moses Brown, a Boston merchant, who received $2276.22 for gold ingots delivered on February 12, 1795. The deposit amounted to 128 ounces of gold for which Brown was paid in silver coins. A total of $83,302.13 in gold ingots, chains, coins, clippings, and dust was accepted for deposit during the 1795 year.

According to Robert W. Julian, who studied archival records pertaining to the early Mint, it was probably during May, 1795, that Robert Scot cut the dies for the half eagles, the first gold coins manufactured in Philadelphia.

The following month saw the resignation of Rittenhouse as director of the Mint due to ill health. He was replaced by Henry DeSaussure on July 9th. DeSaussure remained in office for only three months, resigning on October 28th. During his tenure gold coin production got under way.

Nine deliveries of half eagles took place in 1795, the first being 744 pieces delivered on July 31st, with 7,963 more produced by September 16th. Eagles or $10 pieces were first delivered on September 22nd, with production ceasing for the year on November 27th.

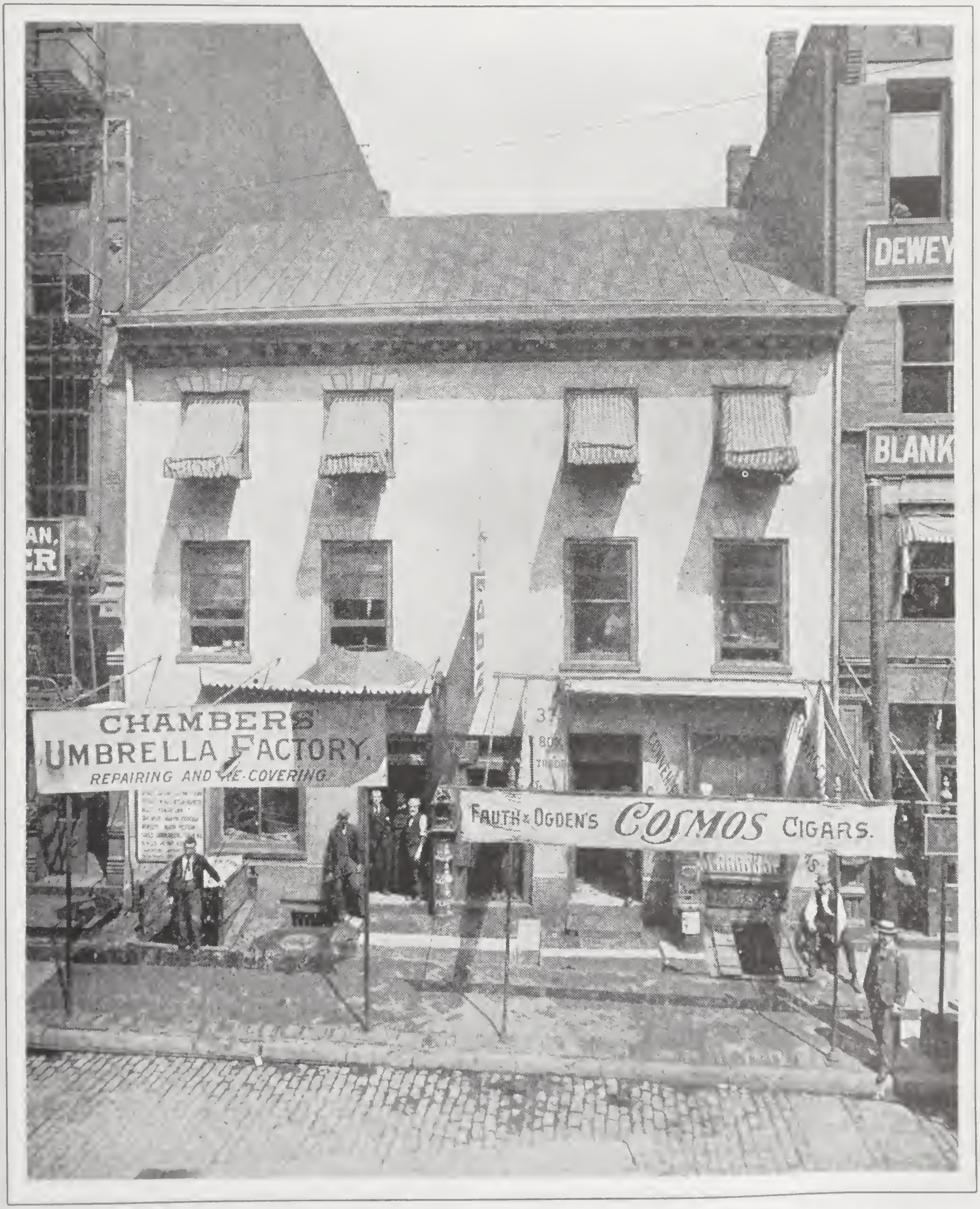
The first year of gold coinage, 1795, saw the production of many dies for the $5 and $10 denominations. Obverse and reverse dies were combined in various pairings, with the result that the year is rich with many varieties. Mint operations were beset with many difficulties, including inconsistent and sporadic availability of bullion, epidemics (yellow fever was to plague Philadelphia during the first decade of the Mint's existence), and the usual problems associated with any new venture.

With the resignation of Henry DeSaussure on October 28th, a new Mint director, Elias Boudinot, was appointed by President Washington. Boudinot remained in office until 1805 when he, too, resigned. It was during his directorship that gold quarter eagles were first produced, on September 21, 1796. It is probably thought that the mintage of quarter eagles would be very extensive in 1796, for two obverse dies were prepared. However, due to the scarcity of bullion, the mintage was very small. Only 1,395 pieces of this denomination were produced.

Concerning the quality of the gold coins minted during 1796, Director Boudinot informed the Mint employees as follows:

> The Director, having had frequent complaints that the coin, both gold and silver, lately struck in the Mint, have been done in a very slovenly, unworkmanlike manner, has examined a number of them and is sorry to find that the complaints have not been without foundation, and great negligence and inattention is charged on the coinage department, with regard to the late deliveries of coin. He therefore expects that in the future greater care will be taken that no coin is passed through the Mint without being executed in a more perfect manner, as a comparison of the former and latter coin does great discredit to the officers of the Mint concerned with the coinage.

As earlier noted, periodic disruptions occurred at the Mint during summer months when yellow fever epidemics swept Philadelphia. At the time the cause of the scourge was unknown, and many residents took the expedient of leaving the city for the duration. During such intervals the Mint closed down. Dr. Warren A. Lapp has written of the associated problems:



A 1903 view of the first Philadelphia Mint (in operation 1792-1833). By this time the structure had been long since used for other activities, including, as shown in this picture, an umbrella factory and cigar stand. A few years later it was torn down.

Elaborate and extensive preparations for closing and reopening the United States Mint during such epidemics were necessary to preserve the security of the dies, bullion and equipment. The workmen had to be paid off when the Mint shut down; the horses which drove the machinery had to be put out to pasture; all usable dies had to be boxed and sent to the Bank of the United States for safekeeping while spoiled or broken dies had to be destroyed; the Mint's books and files had to be brought up to date, locked up and sealed with the Mint's seal, and then deposited with the Bank of the United States; and a guard had to be left on duty at the Mint to patrol the grounds and buildings at half hour intervals during each night. Explicit rules for all such procedures were drawn up by Director Boudinot and were posted in the Mint during 1802 and 1803 for all to see.

As might be expected, each closing of the Mint created havoc with the usual routines and delayed the mintages of particular series previously scheduled for striking. Walter Breen, in his monograph *Early United States Half Eagles* suggested that the haphazard muling of various dies, previously found in other combinations earlier in the series, was an outgrowth of the emergency measures necessary to get the Mint into production once again after an epidemic had run its course.

Another explanation for the pairing of dies earlier found in other combinations is that dies may have been used for a time during normal operations, returned to the shelf for storage, and then taken from the shelf for reuse at a later date. The second and subsequent uses may have resulted in different pairings.

The mintage of quarter eagles continued until 1929, with various interruptions occurring during the late eighteenth and early part of the nineteenth centuries, the years 1809-1820, when no quarter eagles were coined, being the largest omission.

Eagles were discontinued after 1804 and were not minted again until 1838. From that point forward production continued until the early twentieth century. The last $10 issued, the 1933, has the distinction of being the only American gold coin of that year that can be legally held.

Half eagles were the "workhorse" gold coins, for mintage of this denomination continued almost without interruption from the first year of issue, 1795, until well into the twentieth century. The only nineteenth century dates not found on half eagles are 1801, 1816, and 1817. Following the discontinuation of the quarter eagle after 1808, and the eagle after 1804, the half eagle was the only United States coin minted for a span of many years. During early years in which the three different gold denominations — the quarter eagle, half eagle, and eagle — were coined, the half eagle nearly always was minted in the largest quantities.

Gold production within the confines of the United States was not significant until the 1820s, when discoveries in Georgia and North Carolina resulted in large quantities of bullion entering the marketplace. The gold activities in the southern Appalachian territory are often overlooked by writers, for the "gold rush" era in California was more romantic. The gold produced in these southern states constituted most of the domestic bullion utilized for coinage at the Philadelphia Mint from the late 1820s until 1849.

In the region of production, miners and merchants with raw gold were faced with several possibilities. First, they could sell it at a sharp discount to brokers who would in turn make a profit by shipping it to Philadelphia; second, they could pay heavy transportation and insurance fees, ship the bullion to Philadelphia, have it converted to coin, and then await the return shipment, a time-consuming process; or, third, they could ship it to New York or other financial centers to sell the gold to brokers, who would usually pay more than the Mint, but this also involved delays and shipping fees.

Templeton Reid, a Georgia gunsmith, in 1830 conceived the idea of converting gold dust, then traded by weight in the area, into coins. An article concerning the new enterprise appeared on July 24, 1830, in the *Southern Recorder*:

We have examined, during the past week, with great pleasure, an apparatus constructed by our very ingenious fellow citizen, Mr. Templeton Reid for the purpose of putting gold into a shape more convenient than that in which it is originally found. He makes with great facility and great neatness, pieces worth ten, five and two and a half dollars. No alloy is mixed with it, and it is so stamped that it cannot be easily imitated. He sets out soon for the mines, and intends putting his apparatus into operation, as soon as he reaches them. About $1500 worth of Georgia gold has been stamped by our ingenious townsman, Mr. Templeton Reid, with handsome dies . . . Mr. Reid informs us that the gold dust stamped by him will be taken at the Mint and at most of the banks for the value it purports on its face to bearer. This will give it a pretty general currency and make it answer the purposes of money . . .

Although Reid's venture was short-lived, due to the belief, printed in newspapers, that he was making unconscionable profits, the enterprise set the stage for private gold coinage in America. Such unofficial issues became acceptable in circulation although they were not sanctioned by the federal government. So long as private coinage did not degrade regular United States coinage, the Mint laws which stated that "no coin shall be manufactured unless by the federal government" were not enforced. In the southern states the coiners did take care, however, to provide pieces which were acceptable to the general public and to produce pieces which compared favorably to the standards stipulated in various legislation passed by Congress.

Around the same time gold production expanded greatly, due both to new discoveries in the area and to better extraction techniques. In Rutherfordton, North Carolina, Christopher Bechtler, a German immigrant, began to produce gold coins in 1831. A contemporary article in the *North Carolina Spectator and Western Advertiser* gives an idea of the continuing gold discoveries of the period:

> A large number of new mines have been discovered in both this and Burke counties, and others which were sometime since declared of little value have proved to be rich and profitable under a stream of preserving an intelligent operation . . . A mine of late has been discovered on the 2nd Broad River, in the Burke County, on the lands of James Jeans, from which the amount of $2 per day has been washed with a pan, and it is said to be as rich as any discovered in this neighborhood. It was immediately sold to General Bryan for $4,500. There have been several new mines discovered in this county which promise to be very rich . . .

The Bechtler coinage, which included the denominations of $1, $2.50, and $5, continued for two decades thereafter. The inscriptions on each Bechtler coin clearly spelled out in detail the weight, carats, and denomination so as to make the coins a meaningful medium of exchange. Interestingly, credit goes to the Bechtler enterprise for producing the first gold dollar minted in America (federal coinage of this denomination did not commence until 1849).

Despite the ephemeral effort of Templeton Reid and the larger scale production of Christopher Bechtler, large quantities of unrefined gold were shipped overland to eastern commercial centers, a journey made difficult due to robberies and other inconveniences. Petitions were sent to Congress suggesting that a federal branch mint be established in the area.

After deliberation and debate, Congress formulated the Mint Act of March 3, 1835, which contained the following provisions:

Branch mints were to be established. At New Orleans a facility was to be erected for the coinage of silver and gold. In Charlotte, North Carolina, and Dahlonega, Georgia, mints were to be instituted to produce gold coins only. Provisions were made for the purchase of sites, erection of buildings, and the establishment of needed facilities.

The same legislation designated the officers and employees at the branch mints and the method of their appointment, together with the salaries for each post. Provisions for taking the official oath and giving bond were also prescribed. The general supervision of the branches was placed under control of the director of the Mint at Philadelphia, subject to the approval of the secretary of the Treasury. The director of the Mint was authorized to set regulations, to preserve a uniformity of weight, form, and fineness, and to regulate standards.

Up to this time the Philadelphia Mint was the production location for United States coinage. As only one mint was in operation there was no need to provide a distinguishing mark to differentiate coins made there. Following the opening of branch mints, the mints other than Philadelphia were given identifying mintmarks or letters which, when appearing on a coin, served to denote the place of origin. Mintmarks, not used in the United States until 1838, had a rich tradition from earlier years. In Europe, Central America, South America, and elsewhere identifying symbols were used on coins to denote the place of origin. Animals, numbers, flowers, letters, and other devices have served as mintmarks. These symbols established responsibility for coinage as they indicated the particular mint that manufactured the coin. Mintmarks also served to identify and control production from various mints. Although the practice was never adopted in the United States, certain foreign mints had additional notations identifying the chief coiner or moneyer and, in some instances, the assayer.

During the period of gold coinage 1795-1933, seven different mints operated in the United

DIRECTORS OF THE UNITED STATES MINT, FROM 1792–1851.

Henry Wm. Desaussure

Elias Boudinot

Robert M. Patterson

David Rittenhouse

George N. Eckert

Robert Patterson

Samuel Moore

Early Mint directors 1792-1851.
("Illustrated History of the U.S. Mint," George G. Evans, 1890)

DIRECTORS AND SUPERINTENDENTS OF THE UNITED STATES MINT, FROM 1853–1892.

Col. A. Loudon Snowden | James Pollock | Henry R. Linderman
Col. O. C. Bosbyshell
Adam Eckfeldt | Daniel M. Fox | J. Ross Snowden

Directors and superintendents of the United States Mint 1853-1892.
("Illustrated History of the U.S. Mint")

States. The Philadelphia Mint, established in 1792, has operated continuously since this time, but in several different structures and locations. Although "P" mintmarks have appeared on certain issues since 1942, no gold coins ever bore a letter denoting mint origin. Gold coins without a mintmark are thus identified as being Philadelphia issues.

The Charlotte, North Carolina Mint operated from 1838 until 1861. Coins struck there bear a "C" mintmark. The mint at Dahlonega, Georgia operated for the same span, 1838 to 1861, and issued gold coins bearing "D" mintmarks. It is significant to note that the Charlotte and Dahlonega mints coined gold issues exclusively; no other denominations were produced.

The New Orleans Mint operated from 1838 until 1861, and again from 1879 to 1909. Coins struck there bear an "O" mintmark.

The San Francisco Mint, utilizing three different structures, operated from 1854 through 1955 and again from 1965 to the present time (although in recent years the coining facility has been designated as the Assay Office). San Francisco issues bear an "S" mintmark.

In Carson City, Nevada, coins were struck from 1870 to 1885, and again from 1889 to 1893. These issues bear a "CC" mintmark. The Denver Mint has operated continuously since 1906 and has issued coins with a "D" mintmark. Although mintmarks for Dahlonega and Denver are the same, there is no confusion for the Dahlonega Mint closed in 1861, decades before the Denver Mint opened in 1906. It is significant to note that West Point (New York) has been used as a coinage facility in recent years, but coins issued there bear no identifying mintmark and are indistinguishable from Philadelphia pieces.

The Charlotte Mint

Whereas the Philadelphia Mint was authorized to coin all denominations and metals, the branch mint at Charlotte, North Carolina was used only to produce gold coins, drawing upon local sources for bullion.

In November 1835, as a result of Congress selecting Charlotte as a branch mint site, the secretary of the Treasury, Levi Woodbury, proposed that a building be erected to manufacture gold coinage. On July 27, 1837, the mint was finally opened. However, no gold was delivered until 1838. The first year's production consisted of 7,880 quarter eagles and 17,179 half eagles.

It was the practice of the Philadelphia Mint to prepare the dies for coinage and to add the mintmarks for the branch mints, shipping the prepared dies to their final destination, often in December of the calendar year previous to the date appearing on the dies. Charlotte issues of the first two years of coinage, 1838 and 1839, bear the mintmark "C" on the obverse above the date. Beginning in 1840 the location was transferred to the reverse below the eagle and the design was changed from the Classic to the Coronet type.

Coinage of $2.50 and $5 pieces in Charlotte was fairly continuous. Quarter eagles were minted for 19 of the 24 years from 1838 to 1861, and half eagles were produced every year but one, 1845. Beginning in 1849, gold dollars were minted for eight years, not continuously, until 1859. From 1838 to 1861 over $5,000,000 face value of gold coins came from the Charlotte presses. Of this amount $109,138 represented gold dollars.

The first officials of the Charlotte Mint were John H. Wheeler, superintendent, J. H. Gibson, assayer, and John R. Bolton, chief coiner.

Unlike Philadelphia, which was outfitted with steam-powered presses (an innovation introduced in 1836), the Charlotte Mint utilized old-style screw presses (as did the Dahlonega Mint). Planchet preparation was not as sophisticated, and striking was often irregular, with the result that Charlotte (and Dahlonega) gold coins seen today often exhibit areas of weakness. In addition, Charlotte and Dahlonega issues are characterized by their pale yellow color due to the presence of silver as an impurity.

On April 20, 1861, the Charlotte Mint was seized by the Confederate Army. By that time 5,992 half eagles had been struck bearing the date 1861. Later, 887 were made, after which the minting facilities were shut down. The *Coin World Almanac* prints a poignant note concerning the final year of the Charlotte Mint:

> It is a tribute to the dedication of bureaucrats everywhere that somebody in the then Confederate Mint sent to Philadelphia, in October 1861, 12 half eagles that had been struck under the federal government in early 1861 and had been set aside for assay purposes. Millions of dollars worth of federal property

D.—COINAGE OF THE MINT AND BRANCHES (Continued.)

5.—BRANCH MINT, CHARLOTTE.

GOLD COINAGE.

Period.	Half Eagles Pieces.	Quarter Eagles Pieces.	Dollars Pieces.	Total Pieces.	Total Value.
1838 to 1847 . .	269,424	123,576	. . .	393,000	$1,656,060 00
1848 to 1857 .	500,872	79,736	103,899	684,507	2,807,599 00
1858 . . .	31,066	9,056	. . .	40,122	177,970 00
1859 . . .	39,500	. . .	5,235	44,735	202,735 00
1860 . . .	23,005	7,469	. . .	30,474	133,697 50
1861 (to March 31st.)	14,116	. . .	. . .	14,116	70,580 00
Total . .	877,983	219,837	109,134	1,206,954	$5,048,641 50

Summary of the gold coinage of the Charlotte Mint as given in the 1861 Mint Report. The 1861 mintage of the half eagles refers to issues struck during the fiscal year beginning July 1, 1860, and were mostly (with the exception of 1,597 pieces) of the 1860 date.

D — COINAGE OF THE MINT AND BRANCHES, (Continued.)

4.— BRANCH MINT, DAHLONEGA.

GOLD COINAGE.

Period.	Half Eagles Pieces.	Three Dollars Pieces.	Quarter Eagles Pieces.	Dollars Pieces.	Total Pieces.	Total Value.
1838 to 1847.....	576,553	.....	134,101	.....	710,654	$3,218,017 50
1848 to 1857.....	478,392	1,120	60,605	60,897	601,014	2,607,729 50
1858.....	19,256	.....	900	1,637	21,793	100,167 00
1859.....	11,404	.....	642	6,957	19,003	65,582 00
1860.....	12,800	.....	1,602	1,472	15,874	69,477 00
1861 (to February 28th,)..	11,876	.....	.....	1,566	13,442	60,946 00
Total.....	1,110,281	1,120	197,850	72,529	1,381,780	$6,121,919 00

A summary of the coinage of the Dahlonega Mint as given in the 1861 Mint Report, 1,566 gold dollars listed under 1861 represent pieces struck during the fiscal year beginning July 1, 1860 and were dated 1860.

had been seized by the Confederacy, and yet somebody was more concerned with the integrity of the Charlotte Mint than the Confederate Treasury.

Following the cessation of coinage, the mint facility was used as an office by the Confederate Army. Later it was occupied by Union Army officials. Still later it functioned as an assay office, although no further coins were produced. In 1935 it was decided to raze the mint so that the site could be used for a new post office building. Private citizens acquired the building, dismantled it, and re-erected the structure in a city park, where it serves today as a facility for displaying art and is known as the Mint Museum.

The relatively small number of pieces produced (in comparison to the mintages of Philadelphia), the irregularity of the coins' surfaces which gives them an interesting character or flavor, and the historical connections with the southern gold discoveries have combined to make Charlotte pieces high on the list of collectors' favorites today. All Charlotte gold coins can be termed scarce, and many varieties are extremely rare. Few of any date survived in Uncirculated grade.

The Dahlonega Mint

In the 1830s Dahlonega, Georgia was a center for gold bullion trading activity. It was thus logical that when petitions were circulated regarding the establishment of a mint in Georgia, Dahlonega would be selected as the site. The Mint Act of 1835, made this a reality.

Late in the same year contracts were solicited for the construction of a mint building which was to be similar to the one to be built in Charlotte. In 1837, Dr. Joseph T. Singleton was appointed superintendent and treasurer, Joseph W. Farnum was named assayer, and David H. Mason was made coiner at the Dahlonega Mint.

On April 23, 1837, machinery for manufacturing coins was sent from Philadelphia. The presses were of the old-style screw type and were slower and less precise than the steam-powered presses in use at Philadelphia. Mason, the coiner, arrived from Philadelphia with two half eagle dies on January 26, 1838. Bullion was first deposited at the branch mint in Dahlonega on February 15, 1838, and the coinage of half eagles began on April 17th. Total production the first year amounted to 20,583 examples.

On January 10, 1839, Robert M. Patterson, director of the Philadelphia Mint, sent quarter eagle dies to Singleton. These, with the mintmark "D" over the date, were used for the initial coinage which amounted to 13,674 pieces. The "D" mintmark, located on the obverse of Dahlonega issues of 1838 and 1839, was transferred to the reverse of 1840 and later issues when the Coronet type was introduced.

Before its closing in 1861, Dahlonega recorded the production of 72,529 gold dollars 1849-1861. Quarter eagles numbered 197,850 pieces and were produced in 20 of the 24 years the mint operated. In 1854 $3 pieces were struck to the extent of 1,120 pieces and are considered to be rarities today. Half eagles proved to be the most popular denomination, and pieces were struck in each of the 24 years of operation, with total production amounting to 1,106,274 examples. The value of Dahlonega's output amounted to $6,102,884 for all denominations.

On April 8, 1861, the Confederate Army seized the Dahlonega Mint. It is believed that $13,345 worth of uncoined gold was on hand at the time, but this has never been verified officially. As federal coinage records do not include a figure for 1861-D gold dollars, it is presumed that those minted, believed to be in the range of 1,000 to 2,000 pieces, were produced under the aegis of the Confederacy. Toward the end of the Civil War the Dahlonega Mint was used to store assets of the Confederate Treasury. Later, the structure was given to the state of Georgia. In 1873 the building became the main facility of North Georgia College, a status it enjoyed until 1878 when it burned to the ground.

The New Orleans Mint

The Mint Act of 1835 also provided for the establishment of a branch mint in New Orleans, Louisiana whose express purpose was to coin both silver and gold issues (unlike Charlotte and Dahlonega which were set up to mint gold coins only).

New Orleans was considered the most important of the three branch mint locations proposed as its geographical location at the mouth of the Mississippi River made it the center for trading throughout the Midwest. During this period more foreign trade was conducted there than in

any other city in the United States. It was thus desirable that the New Orleans Mint be able to convert foreign coins into United States issues.

On June 19, 1835, the city of New Orleans presented the federal government with land on which the mint was to be constructed. Following plans drawn by William Strickland, the cornerstone of the building, with a front 280 ft. in width and three stories high, was laid in September. It was not until 1838 that the New Orleans Mint was ready for full-scale production. David Bradford was named superintendent, Edmund Forstall was treasurer, William Hurt was assayer, and Rufus Tyler filled the position of coiner.

Robert M. Patterson, director of the Philadelphia Mint, sent two pairs of dime dies, each bearing a distinctive "O" mintmark, to New Orleans on April 9, 1838. Subsequently this denomination represented the first coins to be produced in that city, although in 1837 a pair of cent dies was sent to test the apparatus (but apparently no coinage for circulation resulted, and the dies did not bear a mintmark).

The first gold coins struck at New Orleans were quarter eagles minted in 1839, each with a distinctive "O" mintmark above the date (in later years all New Orleans Mint coins had the identifying letter on the reverse). In 1839 17,781 quarter eagles were made. From that point until January 31, 1861, when the New Orleans Mint was seized by the state of Louisiana, approximately $41,000,000 in gold coins emanated from the facilities, with the emphasis being on $10 and $20 pieces. Denominations produced included $1, $2½, $3 (just one issue, 1854-O), $5, $10, and $20.

On March 31, 1861, control of the mint went from the state of Louisiana to the Confederate States of America. Coinage continued until May 31, 1861, after which time the facility shut down. On May 1, 1862, Union forces recaptured the city, but the mint facilities were in such a state of damage and disarray that no coinage was considered. From 1876 through 1879 the structure served as an assay office. In the latter year coinage resumed, continuing until 1909, after which production ceased. Today the New Orleans Mint structure still stands and is being restored as a museum. Among New Orleans gold coins there are many scarce and rare issues. Perhaps the most curious of all is the 1841-O half eagle, the very existence of which is controversial (see the chapter on half eagles). In the $10 series the 1841-O (2,500 minted), 1859-O (2,300), 1879-O (1,500), and 1883-O (800) are recognized as rarities, while in the double eagle series the same status is given to the 1854-O (3,250), 1856-O (2,250), and 1879-O (2,325). While issues produced during the first years of the New Orleans Mint's operation were struck using old screw-type presses, the evidences of weak and irregular striking so often seen on surviving examples of the Charlotte and Dahlonega coinage do not have a counterpart among New Orleans pieces. The New Orleans facility seems to have been operated with greater care and technical skill.

The San Francisco Mint

The California Gold Rush, which began with the incidental finding of flakes of the precious yellow substance in the race of Sutter's Mill in January 1848, was certainly one of the dramatic events of American history. In terms of gold bullion produced it represented a far larger bonanza for explorers and miners than did the gold activities of southern Appalachia two decades earlier. Once again, private gold coiners received bullion from various regions and fulfilled the need for a circulating medium of exchange by manufacturing gold coins. As before, the federal government allowed these gold coins to circulate, although official recognition was not given. The California gold bonanza was felt all over the United States, and beginning in December 1848 bullion from the Golden State reached Philadelphia. Soon it was realized that vast quantities were yet to come, a factor which led in part to the Mint Act of March 3, 1849, which authorized the coinage of gold dollars and double eagles. During this period the branch mints at Charlotte, Dahlonega, and New Orleans, together with the main facility in Philadelphia, were producing gold coins of various denominations. Although gold metal was in abundance in California, there was an acute shortage of circulating coins.

On September 3, 1850, a provision was made for the establishment of the United States Assay Office in San Francisco. The assayer, Augustus Humbert, reported directly to the secretary of the Treasury in Washington. The United States Assay Office, although it was not officially designated

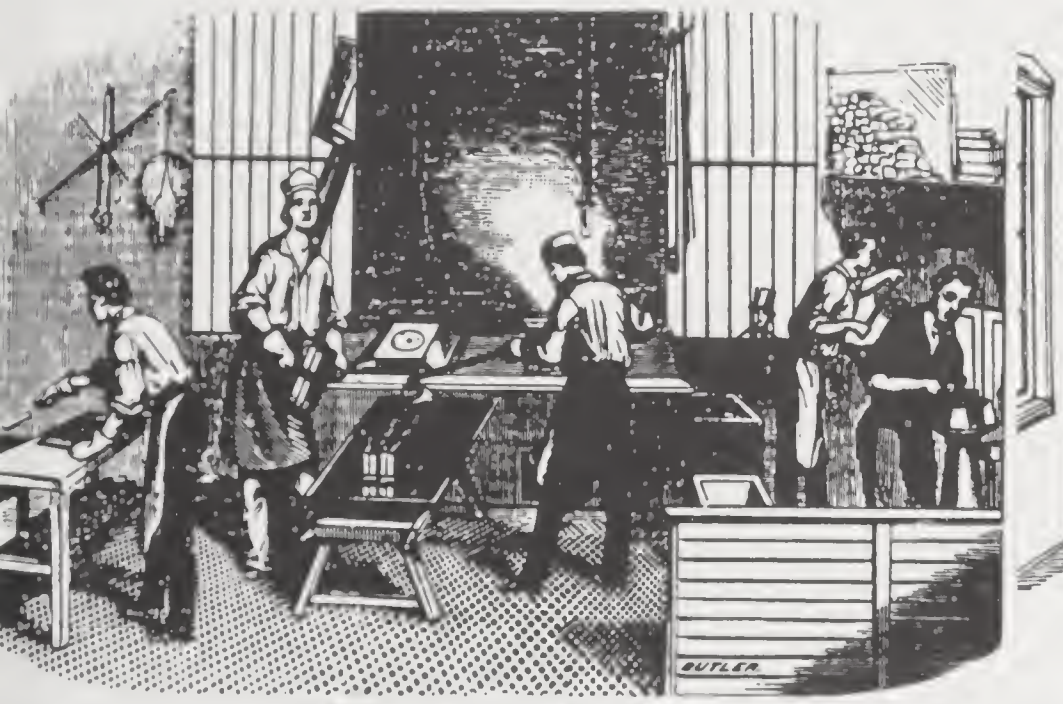
An engraving of the San Francisco Mint published shortly after its opening in 1854. "The machinery is of the newest, finest, and strongest kind used in such establishments," the accompanying text read. "This mint can coin, in gold, about thirty millions of dollars yearly, in different kinds of pieces, or nearly $100,000 daily."

COINING MONEY AT THE SAN FRANCISCO BRANCH MINT.

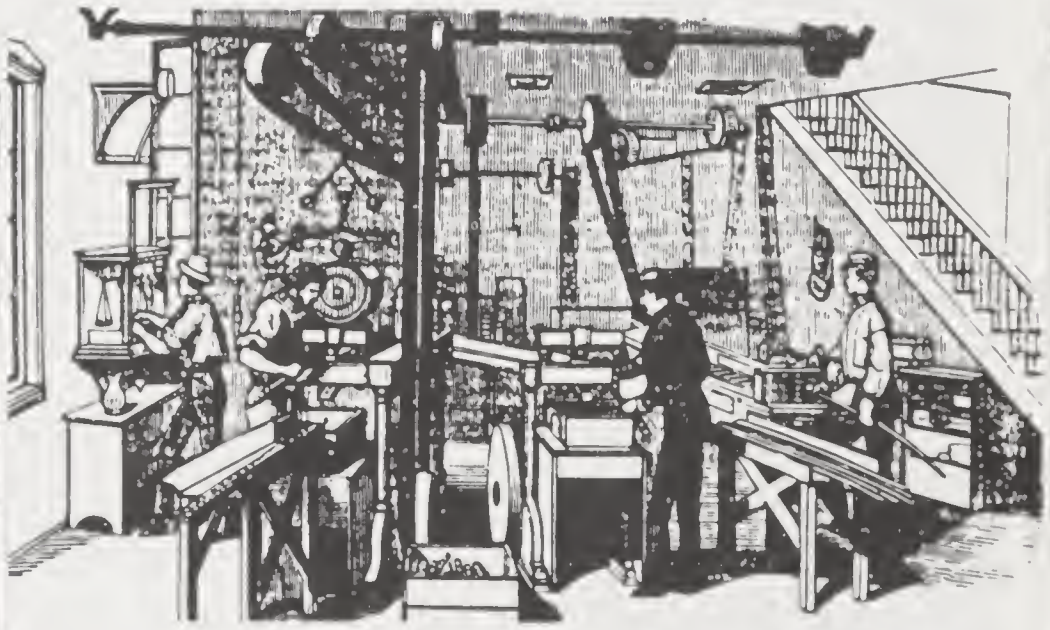
MAKING THE GRANULATIONS.

FRONT VIEW OF THE SAN FRANCISCO BRANCH MINT.

CLEANING THE PLANCHETS.

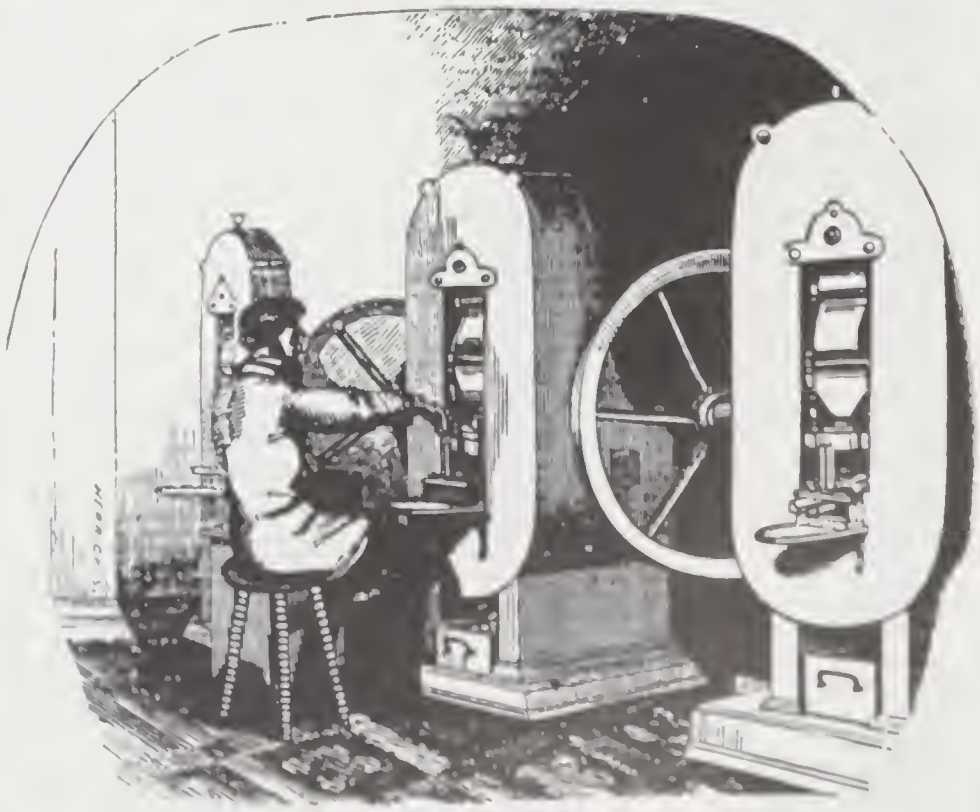


RUNNING THE GOLD INTO INGOTS.



ROLLING AND CUTTING ROOM.

ADJUSTING ROOM.



STAMPING INTO COIN.

[Excelsior Print. Clay St.]

Published by Hutching & Rosenfield, 201 Clay Street, Plaza, San Francisco.

In 1854 the San Francisco Mint was opened. Although some private coins were made after this date, within a relatively short time the output of this branch obviated the necessity for private coining enterprise.

Late nineteenth century view of the second San Francisco Mint. In 1870 the cornerstone for this structure was laid, and coining operations commenced there a few years later. The edifice was used until 1937. Today it houses a museum.

View of the Carson City Mint, circa 1890. Opened in 1870, the facility struck gold and silver coins from 1870 to 1885 and again from 1889 to 1893. Today it houses a museum.

as a mint, can certainly be considered a mint in actuality if not in name.

Recognizing the provisional nature of the United States Assay Office, President Millard Fillmore recommended that a branch mint be established in California in his first message to Congress on December 2, 1850. California had been admitted to the Union only a few months earlier.

The reasons for the establishment of a branch mint in California were similar to those earlier given for other branches. The shipment of bullion from the source of mining to the place of minting was long, dangerous, uncertain, and expensive. Locating a mint in San Francisco, the hub of business activity for the Gold Rush district, would make it possible for miners, merchants, bankers, and others to quickly and inexpensively convert yellow metal to coined gold.

Debates took place in the Senate from late 1851 through early 1852. On July 3rd of the latter year the bill finally became law. Advertisements were placed soliciting proposals to erect a new building, but no contract was awarded at the time. On March 3, 1853, the deadline for receipt of proposals was extended. A construction contract was subsequently awarded to a Mr. Butler for $239,000. This privilege was then obtained by Curtis, Perry & Ward, who earlier acquired the facilities of Moffat & Co. and the United Assay Office (subsequently known as the United States Assay Office of Gold). A new contract was negotiated with the secretary of the Treasury under which Curtis, Perry & Ward agreed to provide both the building and machinery needed for the new mint. Part of the existing establishment owned by the firm was utilized in the construction. The San Francisco Mint, as finished, consisted of a structure 60 ft. square and 3 stories high; 20 ft. wider on the western side than the earlier private mint, which measured 40 x 60 ft.

With a capacity of coining nearly $100,000 in gold daily, or $30 million per year, the San Francisco Mint began operations on April 3, 1854. On April 15th, the first coins, double eagles of the federal design and with the distinctive "S" mintmark were struck. During the first year the mint, with L. A. Birdsall as superintendent, encountered many difficulties, including cramped and fume-laden quarters, insufficient supplies of acid to properly refine gold, and other problems.

The following year, 1855, saw production of a new denomination, the $3 gold piece. By that time the mint was in full operation, and coinage of the largest denomination, the double eagle, amounted to 879,675 pieces for the year, the largest production for any mint that year.

The facilities were recognized for their inadequacy, and sometime in the 1860s it was proposed that a new building be constructed. In 1870 the cornerstone was laid for the second San Francisco Mint, but it was not until the summer of 1874 that the building was ready for full production. On April 18, 1906, San Francisco was ravaged by an earthquake and subsequent fire. While buildings surrounding were burned to the ground, the San Francisco Mint, through the diligent efforts of officers and employees who sprayed water on the roof (the mint had its own well), survived. The last gold coins minted there were eagles and double eagles produced in 1930. Later, in 1937, the San Francisco minting facilities were transferred to another structure, but coinage effected there was limited to copper, nickel, and silver, the United States by that time having discontinued gold issues. Today the second San Francisco Mint, the one begun in 1870, serves as a museum.

Numismatists today recognize many rare issues among San Francisco gold coins. The 1854-S quarter eagles and half eagles are legendary rarities, and only a few are known of each. Many other issues are recognized as being elusive, scarce, or rare. The most venerated San Francisco Mint coin, indeed a piece which is among the greatest of all American coin rarities, is the 1870-S $3 piece, of which just one was struck. Fortunately for numismatists, this solitary example survives today.

Confederate Seizure of the Southern Mints

As noted earlier, the Civil War had important consequences for the three southern branch mints, Charlotte, Dahlonega, and New Orleans. By 1861 gold deposits from Georgia and North Carolina native metals had dwindled sharply from earlier years, so there is a strong possibility that had the Civil War not occurred the Charlotte and Dahlonega mints would have been soon closed in any event.

In late 1860 dies for New Orleans coinage dated 1861 were sent as usual from Philadelphia.

Although all denominations of gold coins had been produced in New Orleans at one time or another, it was contemplated that only double eagles would be minted in 1861. A new reverse had been designed for the double eagle by Anthony C. Paquet; however, a slight discrepancy in the diameter of the reverse was discovered, so Mint Director Snowden telegraphed William A. Elmore, superintendent at New Orleans, to "use the old reverse of the double eagle and not the new ones" referring to the use of the 1860 reverse die.

Shortly thereafter, on January 31, 1861, by authority of the state of Louisiana, the mint was taken over. On February 8th Snowden reported to Secretary of the Treasury Dix:

> I send you the enclosed copy of a letter I have recently received from Mr. Elmore, superintendent of the branch mint at New Orleans. It appears from the communication the committee acting under the convention has taken possession of the branch mint in the name of the state of Louisiana. The right to coin money — one of the highest acts of sovereignty — being expressly granted to the United States and withheld from the states, the action of the state of Louisiana cannot but be regarded as revolutionary in its character, and the destruction of the rights of the people and government of the United States. By law establishing branch mints of the United States they are under the control and regulation of the director of the mint at Philadelphia, subject to the approbation of the secretary of the Treasury . . .
>
> My instructions require weekly reports of this operation from the branch mint at New Orleans; and monthly returns of parcels of coinage from each delivery of coin from the coiner to the treasurer. These reports and coins from the month of January have been received; but the weekly return since the close of the month have been omitted to be sent to me. It thus appears that the institution in question is not conducting its operations in a lawful manner; and although it is still a branch mint of the United States, for no action of the state of Louisiana can legally alter its relation to the general government, yet the coinage from the close of the month of January will not be subject to the test required by law, it has practically ceased to be a branch of the Mint. The coinage of that branch is designated by the letter "O" on the reverse side of each piece. The coins struck in January are legal coins of the United States; but as these pieces cannot be distinguished from others struck since that time having the date 1861; the whole coinage of the year ought to be discredited by the government. The announcement should be made, either by the proclamation of the President or by Congress, if the former should not be deemed proper, that the coins at the branch mint of New Orleans of the year 1861 are not the coinage of the United States and are therefore not a legal tender in the payment of debt; Said coins are designated by the letter "O" on the reverse of each piece . . .

The New Orleans Mint continued operations for several months, until May 1861 when coinage ceased. Elmore was informed by C. G. Memminger, secretary of the Treasury of the Confederacy, that:

> The stern necessities of war compels the Government to collect and receive all its resources. Congress has just adopted the act of which a copy is enclosed. From its terms you will perceive that an offer is made to you to permit the use and occupation of your present dwelling, in consideration that you will undertake the charge and safekeeping of the whole establishment. Be pleased to inform me whether you will accept this offer.
>
> The salaries and all expenses are to cease with this month. This will enable you to complete the coinage of which you wrote in a former letter. You will please notify all your subordinate officers and workmen that their services will not be required after the first of June; and, in the meantime, you will make arrangements for selling all the perishable articles and for placing all the machinery, utensils, and property in such condition that they will suffer no injury for the period during which it is probable the establishment will be closed . . .

A pamphlet titled *History of the Mint*, published in 1895, asserts that the state of Louisiana coined $195,000 in double eagles and the Confederate States of America subsequently produced the same denomination to the extent of $59,820. If these figures are accurate, the mintage of 1861-O double eagles includes 5,000 pieces recorded by the United States government before the seizure of the facility, 9,750 struck by Louisiana, and 2,991 by the Confederacy, for a total mintage of 17,741.

It was supposed by the director of the mint that the branch at New Orleans would be reopened after the war was over. Following the end of the conflict in 1865 (although the city of New Orleans itself was recaptured in 1862) nothing was done. In 1870 there was a debate about whether the New Orleans equipment should be relocated to New York City, but nothing came of this proposal. In 1879 regular coinage recommenced at the New Orleans Mint, and production was maintained until 1909.

1861-dated dies for the production of gold were also sent from Philadelphia to Charlotte and

Dahlonega as was the usual procedure. As noted earlier, on April 8, 1861, the mint at Dahlonega was seized by the governor of Georgia on behalf of the Confederacy. Less than two weeks later, on April 20th, Col. J. Y. Bryce, commanding local soldiers, took possession of the Charlotte Mint. It was reported that no resistance occurred for Union troops were nowhere in the area, and only four people comprised the mint staff: G. W. Caldwell, the superintendent, the assayer, the coiner, and a clerk.

James Ross Snowden, director of the Mint, wrote from his Philadelphia office to Secretary of the Treasury Samuel P. Chase on April 30, 1861, summarizing the matter:

> I have the painful duty to report to you that the branch mint at Charlotte, North Carolina has been taken possession of by a military force acting under the orders of the governor of that state. This event occurred on the 20th inst. My informant states, "While I write, the people are hoisting a Confederate flag over the mint building; and on going out I find an armed guard from a volunteer company at the door."
>
> A committee acting under an ordinance passed by a convention of the people of Louisiana took possession of the branch mint at New Orleans on the 31st of January last. On the 8th of April the branch mint at Dahlonega ceased to be conducted under the authority of the United States, having been seized by orders of the governor of Georgia. And now we have similar information as to the branch at Charlotte. Thus all the branch mints in the southern states have practically ceased to be branches of the principal mint, and, being conducted in an unlawful manner, the coins issued therefrom are not the lawful coins of the United States . . .
>
> In my opinion it would be proper that a proclamation should be made, declaring the coins of 1861, issued by the above-named revolutionary and illegal mint, to be no longer the lawful coins of the United States; and that they are therefore not a legal tender in the payment of debts. These coins, as indicated in the former communication, may be known by the mintmark below the eagle, or the leaf, on the reverse side of the pieces: The letter O indicates the branch at New Orleans; D, Dahlonega; C, Charlotte . . .

In Charlotte only half eagles had been made in 1861 under the authority of the United States government. Deliveries through April 18th indicate that 5,992 pieces had been coined to that point. An additional 887 coins were delivered in May. It is presumed that this latter group consisted of pieces struck under authority of the Confederacy.

In Dahlonega 1,597 1861-dated half eagles were delivered through February 28th. No records are reported from the Dahlonega Mint which would add to this mintage figure. Likewise, no gold dollars were struck at Dahlonega under the authority of the United States government, based upon available Mint records. However, as 1861-D gold dollar dies were sent from Philadelphia, and as 1861-D gold dollars exist, it is presumed that these were produced under the Confederacy, probably to the extent of 1,000 to 2,000 pieces, as noted earlier in the present chapter.

After the Civil War neither the Charlotte nor Dahlonega mint reopened for coinage.

Although there is no record of the Confederate States of America having produced gold coins of its own design, at least four examples of a distinctively styled 1861 Confederate half dollar were produced, and in Philadelphia a contractor, Lovett, struck 12 examples of the 1861 Confederate cent (but never sent them to the South, fearing reprisal from Union authorities).

The 1861 production at Charlotte, Dahlonega, and New Orleans forms one of the most interesting situations in American numismatics. Whose coins are whose? Despite James Ross Snowden's wishes to the contrary, all 1861-C, 1861-D, and 1861-O issues remained legal tender.

The Carson City Mint

The Comstock Lode, a vast vein of silver and gold ore, was discovered in Nevada in 1858. Virginia City, built in the district, grew to become one of the most thriving metropolises of the West, complete with hotels, saloons, gambling parlors, and all the other trappings of a mining city.

Just 15 miles away Carson City, named after Kit Carson, was founded by Abe Curry in 1858. The town, which became the state capital, was selected as a site for a branch mint in 1863, following the passage on March 3, 1863, of a bill to establish coining facilities there.

In October 1864 Nevada was admitted to the Union. Secretary of the Treasury Hugh McCullogh authorized on December 27, 1865, a group of three Nevada citizens to choose a piece of land for the mint. Abe Curry personally donated a square block for this purpose near the center of the city. Construction of the edifice

PRODUCT OF THE COMSTOCK LODE FROM 1860 TO DECEMBER 31, 1886.

Year.	Authority.	Gold.	Silver.	Total.
1860	United States Commissioner of Mining Statistics			$100,000
1861	do			2,275,256
1862	do			6,247,047
1863	do			12,486,938
1864	do			15,795,585
1865	do			15,184,877
1866	do			14,167,071
1867	do			13,738,618
1868	do			8,499,769
1869	do			7,528,607
1870	do			8,319,698
1871	United States Monetary Commission, 1877	$4,077,027	$6,230,587	10,307,614
1872	do	6,310,035	6,611,943	12,921,978
1873	do	10,493,796	11,037,023	21,530,819
1874	do	12,579,825	11,881,000	24,460,825
1875	do	11,739,873	14,492,350	26,232,223
1876	do	18,002,906	20,570,078	38,572,984
1877	Report of John A. Church			34,795,488
1878	do			19,876,034
1879	State tax list			7,477,591
1880	Director of the Mint	3,323,840	3,084,142	6.407,982
1881	do	1,050,000	660,000	1,710,000
1882	do	920,000	860,000	1,780,000
1883	do	1,600,000	900,000	2,500,000
1884	do	2,150,000	1,275,000	3,425,000
1885	do	1,915,700	2,131,400	4,047,100
1886	do	2,064,710	2,328,290	4,393,000
	Total	76,227,712	82,061,813	324,779,404

The production of gold and silver reported separately amounts to $158,289,525; adding to this $166,489,879, not separated, gives a total production of $324,779,404.

A chart from the 1887 Mint Report showing gold and silver production of the Comstock Lode (Nevada) from 1860 through 1886. The metal obtained from this discovery was responsible for the building of the Carson City Mint in the 1860s and its opening for business in 1870.

began on July 18, 1866, and was completed on November 23, 1868, two years later.

Director of the Mint James Pollock proposed on September 27, 1869, that the functions of the Carson City facilities be as follows:

> The branch mint at Carson City, Nevada is rapidly approaching completion. The machinery is all in place, and the operations will soon be commenced. Orders were issued to complete and put in operation as promptly as possible the assay department. This will be done. The superintendent of this branch reports that they will be ready to open in September; and this will probably be the case so far as the general operations are concerned; but the more complicated details in reference to the furnaces, assay apparatus, etc. will require some weeks longer.
>
> For the peculiar character of the bullion that will be deposited for fine bars or coinage, the operative officers of this branch should be practical, experienced, and scientific men. The deposits will be generally as mixed bullion with a gold fineness of two and one half to forty thousandths; silver, nine hundred and forty to nine hundred and sixty, and a small percentage of base metals, lead, etc. This bullion, whether deposited for fine bars or coinage, must be refined and parted, according to the condition of the deposit. It does not seem likely that much, if any, of the parting will be done at Carson. The bars of mixed bullion being officially stamped with both gold and silver proportions, will be as salable in that form as if they were parted. Quotations are constantly made in the London market of silver bars containing gold, and selling accordingly.
>
> The operations of this branch will, in all probability, culminate in commercial bars, as *coin* already abounds in that region so extensively that their papers express alarm as to this prospect of a redundancy. Practically it will be much more an assay office than a mint, and, as such, fully meets the wants of the district. The power to make coin may be an occasional benefit; perhaps, in the future, of much advantage. Instructions relative to the transaction of business at the branch mint at Carson, approved by the secretary of the Treasury, have been prepared and forwarded to the superintendent of that branch. Under the supervision of skilled and experienced men, with an honest and energetic administration of its affairs, this branch may fully meet the expectations of its friends, and greatly promote the general prosperity of that interesting portion of our country.

By November 1, 1869, the installation of the machinery at the Carson City Mint was completed. Abe Curry, who played the most important part in the inception of the mint, was appointed to the post of superintendent. The facility was officially opened for business on January 8, 1870. Shortly thereafter, production got under way with the coinage of half eagles, eagles, and double eagles, the only gold denominations which would be produced at that location.

Production of gold and silver issues continued through 1885, after which time production was suspended until 1889. From 1889 through 1893 coinage was resumed, after which time the Carson City Mint served only as an assay office. Today the Carson City Mint building still stands and serves as the Nevada State Museum. Several relics of the mint operation are on display, including an original coin press which is used to strike souvenir medals.

During the period of coinage activity 1870-1893 the Carson City Mint produced $23,823,425 in gold coins. Generally, Carson City issues were produced in smaller quantities than comparable issues at Philadelphia, San Francisco, and New Orleans, with the result that today numismatists recognize several rarities among the half eagles, eagles, and double eagles produced there. As little thought was given to preserving specimens for collectors, the survival of Uncirculated pieces is a matter of chance, for virtually all were originally released into the channels of commerce. Those few Uncirculated coins which do survive nearly always show extensive bagmarks.

The Denver Mint

In 1858 and 1859 gold discoveries were made near Denver, Colorado. By this time the distant California gold fields had lost much of their glitter, so attention was turned toward Denver and the mountains immediately to the west of the city. Over the next few years Central City, Georgetown, Idaho Springs, Black Hawk, and other mining communities became prominent. Thousands labored to extract gold and silver from the earth nearby.

As was the case with other gold producing areas, there was a local demand for a coinage facility. Although a ready market existed for unrefined gold, it sold at a discount from its value stated in terms of coins. In an effort to realize a higher value, some owners shipped bullion to distant mints, even including Charlotte and Dahlonega in the early days, but this entailed the expense of insurance plus lengthy delays. Sensing an opportunity, Clark, Gruber & Co., a banking

firm, established a mint in Denver and produced sizeable quantities of gold quarter eagles, half eagles, eagles, and double eagles in 1860 and 1861.

In January 1862 the Treasury Department proposed the establishment of a branch mint at Denver. On April 21st of the same year Congress enacted the proposal into law. Shortly thereafter the coining facilities of Clark, Gruber & Co. were purchased, with the intention that the building would be soon opened as a branch mint. However, no such coinage materialized, and the office was used only for assay purposes.

In 1876 President Ulysses S. Grant sent a message to Congress which incorporated a petition in which the city of Denver requested that the assay office become a branch mint:

> The Philadelphia Mint, located upon the eastern limits of our country, near the seat of the government, is the controlling or parent mint, and to its care has been assigned all the government coinage; but the rapid development of the mineral resources in the far West, on the Pacific slope, compelled the establishment of mints for coinage at San Francisco, Cal., in Carson City, Nev., but even with this addition of the coinage facilities they are still found inadequate for the wants of the people, nor is their capacity sufficient to keep pace with the rapid development of the mining industries and production of the precious metals.
>
> In the location of the coinage-mint at Denver, it will readily be seen that it is central. Central, as between the eastern and western coinage mints; central, as being in the very center of an immense mining area, which, although known within the past sixteen years, produces annually $15,000,000 in precious metals. Denver has a population of 20,000. Living is as cheap as in the eastern cities; meat and bread much cheaper. Every branch of trade is represented and all classes of merchandise as low as in the states, freight added. We're in the midst of 3,000 square miles of mineral-bearing countries. It must be conceded that she has some claims on the government for the location of the coinage-mint.
>
> The government owns in the center of the city of Denver one entire block, consisting of 32 lots, 400 feet in length by 266 feet in width; also the present mint property [the Clark, Gruber facility], which is 100 feet by 125 feet. There is no question but what the government requires is more capacity for the coinage of the precious metals. The question is fully recognized in the passage of the act establishing the branch mint at Denver, as early as 1862 and the intent and purpose was to coin the precious metals, but the Civil War made a premium on those metals and gave us the greenback as a circulating medium. Thus there was no necessity for the coinage of the metals, and the Denver Mint was made an assay office for the time being, or until such time as the government would require its services in coining as was the wording of the act. We simply ask now that we be restored to our rights under that bill and be made a coinage-mint.

It developed that the Clark, Gruber facilities and another building constructed were never used as a mint by the government. In February 1895, an act was passed by Congress to establish a branch mint in Denver, a supplement to the earlier legislation. On April 22, 1896, a site was purchased for the construction of a new building. On March 18, 1904, additional legislation relating to the situation was passed. The wording, which reads in part as follows, is a bit confusing, for the term "mint" as applied to the earlier facilities is not accurate; the government minted no coins there.

> Until the mint and assay office at Denver shall become a coinage mint in accordance with the law, the present mint shall be continued as an assay office, and the business now transacted at said mint shall be continued therein, and the appropriations heretofore and herein made shall be applicable to such mint.

On September 1, 1904, the "mint" was formally moved to the new structure. By 1905 coining presses were operating and in 1906 the Denver Mint began producing coins for circulation under the supervision of Frank M. Downer, superintendent. In that year gold coins amounting to $23.8 million and silver pieces totalling $3.2 million were produced. Much of the gold came from the nearby Cripple Creek district. From that point until the final production of gold coins at Denver in 1931, the facility turned out approximately $350,000,000 in gold issues, with emphasis on double eagles produced for banking settlements and international transactions. Quarter eagles were minted for only three years, half eagles and eagles for only seven years, but double eagles were produced for fifteen years.

Among Denver Mint issues numismatists recognize several scarce and rare pieces today. The 1911-D Indian quarter eagle is the most desirable of its series, and the 1911-D half eagle is considered to be scarce. Among ten dollar issues the 1911-D, with the mintage of 30,100, is particularly elusive in Uncirculated grade. The greatest gold rarities are to be found in the double eagle series. 1924-D, 1925-D, and 1926-D are considered scarce, and 1931-D is rare. The

greatest honors go to the 1927-D. 180,000 were minted, but apparently nearly all were later melted, with the result that just a few are known today—elevating it to the status of one of the rarest of all twentieth-century American coins.

The Philadelphia Mint: Later Years

By the time branch mints were opened in Charlotte, Dahlonega, and New Orleans in 1838, the Philadelphia Mint facilities had been transferred to a new location. The second Philadelphia Mint, the cornerstone of which was laid on July 4, 1829, was completed and occupied in January 1833. Resembling a Greek temple, the structure of white marble featured Ionic columns across the front. This building was to serve for nearly 70 years.

In 1836 steam-powered presses were introduced to the Mint, replacing the hand presses in use since the earliest days of operation. Other advances came quickly, and before the nineteenth-century was complete the Philadelphia Mint employed new processes for the preparation of dies, high-speed striking of coins, and nearly all of the the varied operations.

Unlike the branch mints, which existed strictly for producing coins for circulation, the Philadelphia Institution was the center of policy making, die preparation, conception and implementation of new designs, and services for collectors. The latter activity became particularly important in 1858, when Proof coins were publicly sold for the first time. Earlier, Proofs, then called "master coins," were available only to dignitaries, Mint officials, and collectors who had special connections in Philadelphia. Although rates and practices varied over the years, in general Proof coins 1858 and later could be ordered during the year of issue by paying face value plus a small Proofing charge and ordering the minor coins as a group, the silver coins as a set, and the gold coins either as a set or individually.

By the 1890s the production requirements at the Philadelphia Mint had severely taxed the resources and capacity of the facility, so a new Mint was proposed. Suggestions were made to transfer the location to St. Louis or New York, but Philadelphia retained its status, and in 1901 the newly-completed third Philadelphia Mint opened its doors for business. By 1903 all facilities were in place. This structure remained in use until the 1960s, when the fourth Philadelphia Mint, the facility now employed, was completed. Accompanying the present chapter are two vignettes; tours of the second and third Philadelphia mints as seen through the eyes of a visitor in 1885 and 1903 respectably.

Although the Philadelphia Mint was not close to a supply of native gold metal or ore, vast quantities of gold coins were produced there. All gold production from 1795 until 1838, when branch mints were first operational, were produced at Philadelphia, as were all gold Proof coins struck for collectors as well as a generous quantity of pieces made for banking and the channels of commerce.

In summary, it is significant to state that of the seven United States mints in operation during the period in which gold coins were struck, 1795 to 1933, two of them, Charlotte and Dahlonega, were established solely for the manufacture of gold coins, two others, Denver and San Francisco, were established because of the proximity of gold strikes, and another, Carson City, was conceived because of the nearness of both gold and silver.

Two Visits to the Philadelphia Mint 1885 and 1903

An 1885 Visit to the Second Philadelphia Mint

The following commentary is excerpted (and in some cases paraphrased for clarity) from the "Visitor's Guide and History of the United States Mint, Philadelphia, Pa.," published by A. M. Smith, Philadelphia, 1885.

Philadelphia has always been home of the "parent" Mint of the United States, the first money-coining institution of our government, having been established in 1792.

The Mint today stands on the northwest corner of Chestnut and Juniper streets. As visitors, we mount the many steps of the marble building and, passing through the doorway, halt in a small rotunda vestibule, with seats against its walls, and, standing there, look directly along a hallway on the right side into the cashier's office, and on the left into the warrant and clerk's department.

An usher with gentlemanly courtesy advances and, learning that our visit is one of observation, immediately starts with us on a tour of the building, conducting us into every portion where it is proper or practicable to admit strangers. As we pass down the hallway directly facing the entrance, we gain sight through a doorway on the righthand side into the

General Weighing Room

where the immense but perfectly exact scales weigh the bullion at the time it is received and again test the exactitude of all gold and silver coin before delivery. We notice with admiration the ponderous but beautifully graceful balances, which never shirk work or give a false report. This splendid balance is probably the largest and finest in the world. The beam, of bronze, six feet in length, rests upon an iron column about five feet. Its extreme capacity is 10,000 troy ounces — about 685 pounds — but such is its sensibility that even when thus loaded it exhibits a variation at the 100th part of an ounce. There is no feature of more conspicuous importance to the proper transaction of business in the entire building. It was made by Mr. Henry Troemner, of Philadelphia, who, for the last quarter of a century, has manufactured all the fine scales used by the government for the weighing of precious metals.

Now, and treading quickly on the footsteps of our guide, we enter

The Yard

or square court. Rising about five feet from the pavement, against the surrounding buildings, are cages formed of heavy latticed wire work, within which are piled tier upon tier of metal blocks, roughly squared, irregular in size, each stamped with its weight, and looking too dull to be silver, too bright to be lead. But, silver they are, and it is in this shape the bullion is received from the assay offices. Each "pig" weighs from 85 to 140 pounds, and an average of over 2 tons a day is melted and coined. A small building on the right was formerly an office for counting and redemption of copper coins. It is now the quarters of the Adams Express Co. in their connection with the United States coin transportation.

Turning to the left, through the windows, we gain a view of

The Deposit Weighing Room

with great scales, strong of pillar and beam, and many large, heavy brass weights. Here all the precious metals are again weighed and the pounds, ounces, and grains of each block exactly determined. There can be no mistakes with these scales, they are the perfection of precision. The largest will weigh from 6,000 ounces to the one hundredth part of an ounce. The next in size accommodates 3,000 ounces at one balancing, and the smallest of all will serve 300 at a time. The weights are graded from 500 ounces to five grains, troy, which is sufficiently exact at this stage of the process.

The system of weighing and recording which begins in this room is carried out with every transfer of the metal until it is delivered, as coined, to the cashier. The slightest discrepancy or deficiency not accounted for by loss through manipulation is at once detected and located.

On the right of this room is a vault where, piled from floor to roof, row in front of row, behind a wire screen, are hundreds of small yellow "bricks" — gold! Crowded into that small end of the small vault there is in sight from 30 to 35 million dollars worth of gold. Twelve of these treasure vaults are in the building,

strong as solid masonry, with double iron doors, metal linings, and the most thief-thwarting locks that can be made.

Standard Weights

Troy weight, standard of Great Britain, is only used at the Mint. To trace back the system of weights and measures, the mode of ascertaining the standard, and all matters connected therewith is a most interesting study but is impossible to state briefly in these few pages. At the Mint on display is an original set of weights made of bell metal under orders from Queen Elizabeth. The set is in fine condition, and until 1824 the weights were used to regulate all the standards in the British Kingdom. In that year the "Imperial Standards" were substituted, the brass troy pound of 1758 being declared the only "original and genuine standard." The "parent" of this brass troy pound is now in the Standards Office, London. A duplicate, in bronze, is used at the United States Mint in Philadelphia to gauge all the official troy weights of the government.

A warm reception is given us in

The Deposit Melting Room,

to which the gold goes after first leaving the weighers, in iron boxes, each with two locks. Here floor furnaces are glowing with fierce flames in the midst of which are crucibles of plumbago, black-lead pots, in which the precious metal is being reduced to a state of pouring fluidity. These crucibles are placed in the furnaces empty, on a stand, which rests upon the grate, and which is filled with common coke-dust to guard against adhesion of the pot to the stand. The fires are lighted and the crucibles gradually heated in order to prevent cracking which might happen if intense flame was at once applied. The metal is introduced while the crucibles are in the furnace. To the metal is added borax, another "fluxing" material. A "muffle" of baked clay is then put over each pot, and this again topped with a flat cover made of black lead, with which protection the fire can entirely surround the vessel. The heat, being thus equally distributed, renders the melting uniform, thus insuring a thorough mixture, a most important matter. When sufficiently fluid the contents of each crucible are cast into a bar, which is numbered. A small piece cut from the bar goes to the Assay Department and there, from the sample, is ascertained the proportion of pure metal in the deposit.

Following the regular course we next enter the

Rooms for Melting and Refining

There are two of these, for silver and gold respectively. The necessary alloy for each lot is regulated at the office of this department and sufficient added to bring the bullion up to United States standard for coin, and also to secure the hardness, above that of native metal, necessary for the durability of pieces in circulation. The melting operations are similar to those described, the metal being placed in crucibles. After these have been thoroughly tested in the fire, the large blocks of silver are lowered by means of a crane, chain, and hooks. When a proper stage of liquefaction is reached, sufficient of the glowing metal is ladled out to fill a crucible, grasped by red hot tongs, and from it is poured into moulds from whence it emerges as "ingots," or small bars about a foot in length, half an inch in thickness, and regulated in width from one to two and one half inches according to the size of the coin into which they are to be manufactured. They are not unlike large railroad spikes, one end being tapered and pointed to facilitate its first introduction between the pressure rollers. Here also are cast the bars of gold and silver which are bought for fine art and commercial use, the weight and value of each being stamped upon it in the deposit room. The gold ingots vary in value from about $500 to nearly three times that amount.

In the melting room for gold and in many other departments the floors are overlaid with hexagonal latticed iron plates through which fall the small particles that adhere to shoes of the operatives or are otherwise detached. The sweepings of the floors are carefully preserved so they may be treated to obtain the gold therein. Over $20,000 worth of the precious metal is thus saved annually. The towels, gloves, and water used in cleansing are also made to yield up the yellow grains that have accumulated, and these increase the "savings account" by a very considerable aggregate.

On the same side of the building and adjoining these rooms are the seven melting furnaces where copper, nickel, and other base metals are passed through the fire. The process is so nearly identical with that described for gold and silver that no special mention is required.

As we move on through the corridor to the next department we pause to look down through a window into a large vault-like room in which is

The Famous Mint Engine

which supplies most of the motive power for the heavy machinery of the establishment. It is a ponderous, beautiful triumph of mechanical art, of 160 horse power, almost noiseless in its working, and

possessing peculiarities of construction which render it unlike any other. This huge steam engine has steadily done its work for over 40 years and is still "good as new." As is common with other manufacturing enterprises, power from the engine is transmitted to individual machines by means of a system of shafts, pullies, and belts.

The Rolling Room

is next entered. The rollers can be adjusted to produce any thickness of "ribbon." The ingots are passed between the steel surfaces at the rate of 200 an hour, in the process of "breaking down," until they become the proper sized strips from which the "planchets" are cut. In another department the planchets receive impressions and become coins.

Each gold strip is passed through the rollers 10 times, whereas each silver strip is processed seven times. An ingot measuring 12 inches at the beginning is at the end six times longer. With each passing through the rollers the strip becomes longer and thinner. The immense pressure necessary heats the large rollers intensely, and the metal strips become heated as well. Each strip has to be annealed several times in the furnaces during the process so that the metal does not become brittle and subject to fracture or breakage.

The Annealing Process

To soften the elongated ingots they are at this stage once more subjected to the action of fire in the annealing furnaces. To guard against any loss of gold, from abrasion or other causes, the strips are placed in a copper case before being placed in the furnace. The silver strips, backed up to the door of the heated chamber on a bench resting on a high, wheeled truck, are put in without any protective covering. Then the heavy doors of the furnaces are shut, by massive weights raised or lowered by chains running over grooved wheels, and the metals are subjected to heat from burning oak wood, which alone is used here, until a certain red heat is reached, the exact temperature of which is not known, the experienced eye of the operator detecting the proper moment for removal. The bars, when withdrawn, are by chain and crane deposited into a wire basket and lowered into a tank through which constantly flows a stream of clear water, where they remain until cool. When taken out the strips are sufficiently soft for all further manipulation.

The time required to anneal silver strips is about 20 minutes. The average amount of metal placed in a furnace as a charge is 300 pounds. From 15 to 20 charges are put through each furnace in operation.

It sometimes happens that lumps of hard metal are found in the strips, rendering the surface uneven. Planchets cut from such portion would be too heavy. To correct this the strips go to

The Drawing Benches,

a table with a noisy endless chain, running from right to left, and a little carriage with pincer attachment which grips securely one end of the strip showing edgewise between two perpendicular cylinders of steel in an iron box or bed, secured to one end of the bench. These are "set" at exactly the distance apart which it is desired to have the strip in thickness, the attendant touches a foot-pedal, the pincers nip the strip; another touch, and a hook attaches the carriage to the chain and away it goes to the other end, dragging the strip after it, leaving every irregularity behind and coming through exactly perfect. The moment these cylinders release the metal ribbon, it is dropped by the pincers, and the carriage rolls back to its starting point to be again fed.

Then the strips are well washed and passed over to

The Cutting Presses,

of which there are six, in the same room, behind the rollers.

Each press is supplied with a steel punch suitable for a different sized coin. The strips are weighed before being punched, and if exact or over weight they are passed, as any surplus can be filed off; if too light they are returned for remelting. Through the cutter the average number of planchets or round pieces dropped per minute is 225, though a speed of 280 can be obtained. The perforated strips go back to the crucible.

We follow the planchets into

The Coining Room

at the northern end of which they are thrown upon a table for sorting. All that show the least imperfection are slipped through a hole into the rejected box, while the perfect ones, placed in another receptacle, are carried to

The Adjusting Room,

where the nimble fingers of many ladies and the perfect accuracy of the delicate scales before each operative quickly prove the weight of every blank. If too heavy, but nearly right, a few strokes of a fine file make it perfect (thus causing what numismatists today know as "adjustment marks"), if greatly overweight, it must be remelted. The scales used here are so sensitive that even free circulation of air is not permitted

in the room.

After adjustment the planchets return again to the coining department, and, as a preliminary to stamping, are put through

The Milling Machine.

The lady attendant feeds the brass cylinder on top with blank planchets. On the bottom of the stack each lower piece, as it sinks beneath the level of the bedplate, is struck by a revolving feeder which drives it horizontally between a revolving steel wheel on one side and a fixed segment on the other. After making four revolutions it drops into a box beneath. At this point the planchet has a raised rim or edge. This process facilitates the eventual striking of a coin, for less metal has to be displaced to make the raised rim during the final coining process. The rim serves two eventual purposes: to protect the surfaces of the finished coin and to facilitate the stacking or piling of pieces. Many persons call the vertical bars or "reeding" on the edge the "milled edge." This is an error, for the reeding is done later and is part of the process of coining. The milling machine simply raises the rims.

These machines do their work with wonderful rapidity, but the planchets by the time they are so far through are dirty, black, greasy, and look like anything but silver. In order to prepare them for reception of the dies which shall convert them into coins, they are transferred to

The Cleaning Room,

where they are placed in large steel pans or bowls and put into an oven or furnace until the heat causes them to show a color like gold. Then a swinging crane, with its hooks and chains, grapples the bowl, brings it over and lowers all down into a tank containing an acid cleansing solution in a boiling state, and all of the foreign accumulation which has withstood the action of fire is by the acid removed.

Next the planchets, wet from their bath, are poured into a revolving wire cylinder in which is a quantity of dry, hot sawdust in which the blanks are whirled around by the rotating cylinder until when they reach the lower end they are dry, clean, bright, and ready for

The Coining Room and Press.

In this, one of the most interesting departments, are ten of the "perfected coining presses" of different sizes adapted for producing the different denominations, each press capable of finishing from 80 to 120 beautiful pieces of money per minute, the hand of a lady being its only assistant in the work. The arch of the press and table on which it rests are massive iron. In the interior of the arch is a nearly circular plate of brass called a "triangle," fastened to a lever above by two steel bands or "stirrups." The stout arm above is by a ball-socket joint connected with the triangle, and it is this arm which forces it down. The arm connects with the level above by a knee-joint, and when the crank lifts the further end of the lever the knee is drawn in and the arm forced down until it is perfectly straight, at which stage the crank has made a revolution and again the lever is lowered, the knee forced out, and the arm again raised — all of which motions are followed by the triangle with the same regularity. Buried in the lower part of the arch, under the triangle, is the "die stake," a steel cup in which is fastened a die, bearing the *reverse* impression of the coin to be struck. The base of this die rests solidly on the iron bed. Its face projects about an eighth of an inch above. Over this is placed a steel "collar" which is fluted or "reeded" inside of exact diameter to receive snugly a blank or planchet. The *obverse* die is fastened into the triangle above. Into an upright tube, just in front of the triangle, is fed the planchets. The bottom planchet in the stack is seized by a pair of steel fingers, carried over the collar, and deposited upon the reverse die. Then the knee of the press straightens, the obverse die in the triangle is forced into the collar, and a pressure of about 80 tons is brought to bear upon the imprisoned planchet. The impression is made, the expanding metal is forced into the collar flutings, and "reeding" results. Then the knee is bent, raising the die about half an inch. The die-stake is elevated so that the newly made coin upon it just clears above the collar, and the feeders, which have been waiting their turn for work, come with another blank and push the finished coin off on an incline down which it slides into a box beneath.

The Seyss automatic weighing machine is a peculiar attraction of the coining room and is one of the most marvelous and complicated pieces of mechanization in existence. It has 10 scales to which the planchets are fed through cylinders, and every piece is weighed. The "shorts," the "overweights," and the exact pieces are distributed into different boxes, to be disposed of as the Mint laws direct. If two pieces try to struggle into place at one time, an electrical monitor sounds an alarm and then only is human intervention necessary.

The counting boards used in this department are very simple but most efficacious aides in expediting business. They are flat wooden surfaces, with parallel divisions of thin copper strips, rising just as high as a

coin is thick. The coins are thrown upon the board and settle in the ridges; all not finding place are swept to and tilted off the hinged end, the amount remaining on and filling the board is recorded, and they are turned into a drawer.

Here also the larger silver and gold coins are first counted by hand, then each thousand pieces are weighed. A slight deviation above or below the exact standard is allowed to pass, but it must be *very slight*, for by law the variation in 1,000 double eagles, when delivered to the coiner, must not exceed 72 grains.

Having now witnessed the mechanical operations by which the native metal is converted into coins, before describing the artistic and scientific departments not open to the general public, we follow our guide to the second floor of the building and enter

The Cabinet

where, in rooms or a room, 54 feet long by 16 feet wide, peculiarly adapted for the purpose, is displayed a collection of interesting relics of ancient and modern times that would give the intelligent student months of enjoyable study and are sufficient to satisfy the appetite of the most greedy curiosity-seeker. Special custodians received us here. The official existence of the Cabinet began in June 1838, but the wisdom and zealousness of Mr. Adam Eckfeldt, chief coiner, had led him, for years before, to collect pattern pieces of our own, and the best specimens he could obtain of foreign coinage, so that very considerable and valuable material was on hand at that time. Additions have constantly been made, by purchase, pieces rescued from the melting pot, contributions, and our own "master" or Proof coins — terms applied to those first struck from new dies, with extra care, and preserved from all contact which might wear them or dim the brilliancy of their finish.

The relics are so numerous that extended descriptions or even mention of all cannot be given here. There are fine portraits of the different directors and superintendents of the Mint and a splendid collection of classified mineral ores. Congress in 1839 gave the sum of $1,000 for the purchase of coins. Since that time $300 has been annually appropriated for like purposes. Here are the standard test scales used to prove the weights sent to all United States branch mints and assay offices. These are so sensitive that they will show a variation of the 20-thousandth part of an ounce. To the left of the entrance is a framed facsimile of the law which established the United States Mint, as signed by Thomas Jefferson, then secretary of state under President Washington. Opposite this is a case containing strips exhibiting the color of gold in its native state and also as alloyed with copper or silver. Above this case hangs a cast from the face of Oliver Cromwell, duplicate of one taken immediately after the death of England's great Protector. The grand American eagle, in a case near the exit door, for six years of his life was an inhabitant of the Mint. Nicknamed "Peter," he was killed by accident when he perched on a rotating fly wheel. This bird served as a model for the pattern flying eagle cent in 1856 and also for other coins.

Near the western window is Seguier's machine for sorting coins, its work being in a great measure similar to that of the Seyss weigher seen in operation in the coining room. The collection of Washington and other medals, struck in commemoration of great men and noble deeds, serves to recall the glories of our nation. Colonial coins of every variety are exhibited. In cases, placed against the walls, in the doorways and the middle room are coins of the ancient Greeks and Romans, Persians, Egyptians, and Jews. These have been admirably classified by the expert, Mr. William E. DuBois, assayer of the Mint. There is a very complete collection of medieval and modern coins of almost every nation on the face of the earth which possesses the metallic currency. There are silver pennies of William the Conqueror; Scotch pennies are very rare; a penny of Robert II of Scotland, said to be the only specimen extant; the "widow's mite " known to every reader of the Bible, is in these cases; "siege money," made when the roar of guns drowned the sound of hammers that fashioned the crude coins in silver plate is represented by a pound sterling of Charles I, "Maundy" and "gun" money of James II. Tokens of England, Ireland, and Scotland are plentiful. Even some counterfeits are given a place on account of the excellent rascality exhibited in their manufacture.

Among United States coins there is a double eagle of 1849, which is the only coin of that denomination struck during that year and bearing that date (actually, a number of specimens were struck, but it is believed that only two were distributed, of which just one is known today), also a quarter eagle of 1842 (the reference here is probably to the famous 1841 quarter eagle), the only single one in existence so far as is known. There is a series of "bullet" money of Siam, which ranges from one third of a cent to five dollars. The private gold coins of the Pacific coast, Utah, North Carolina, and Georgia are to be seen here. (Note: Large portions of the Mint Cabinet and the display cases were moved to Chicago for the World's

Columbian Exposition in 1893. In later years the Cabinet, then known as the Mint Collection or the National Coin Collection, was transferred to the Smithsonian Institution, Washington, D. C., where the coins presently are stored and exhibited.)

We have now made the tour of all the departments open to the public, but if the readers will follow the text they will obtain a perfectly clear understanding of all that goes on behind the closed doors. We first describe

The Engraving Rooms

reached by way of the gallery which runs around the building. At the Philadelphia Mint are engraved all the dies used in it and the branch mints of the United States. Those made for New Orleans are distinguished by the letter "O" which is found upon all pieces there coined, "S" is placed upon those struck at San Francisco, and "CC" upon the money made at Carson City. Dies are also made here for medals ordered by the government. Public or private institutions, corporations, or individuals are permitted to have dies made at the Mint and medals struck from those dies on payment of the actual cost of production.

The design is first made upon a large scale and then, by means of the transfer lathe, it is reduced to any desired size, with an exactness of proportion to the original utterly unobtainable to the human eye in hand. The machinery does much, yet the production of dies for such an institution as the Mint requires man's art, genius, cultivation, mechanical skill of the highest order and the finest materials.

The steel used must be of moderately fine grain and uniform in texture, showing, when polished, no spots or patches even when placed under a powerful magnifying glass. From such metal two short dies are forged; and by being put in an iron pot, heated to a red heat, and allowed to cool slowly, they are annealed or made soft. Then they are faced flat and smoothed in a lathe and are ready for the engraver who traces upon them the design and proceeds to work it out with hard steel tools.

When sufficiently finished to pass the most critical examination, the dies are hardened, an operation requiring greatest care so that all fine lines and details may be preserved intact. A mask of fixed oil, or oil thickened with animal charcoal, or lampblack and linseed oil, is put over each face. The dies are then placed face downward in a crucible and roasted in animal charcoal until a cherry-red heat is reached. Then they are plunged into a large tank of water and kept in rapid motion until all ebullition has ceased, after which they are left in the bath until quite cool. If there is any "piping" or "singing", it indicates a crack or other imperfection.

Taken from the water the dies are polished by action of a running iron disc coated with emery flour and oil and are tempered by being put in water which is gradually raised to the boiling point, or by placing them on a heated iron bar until they glow with a rich straw color. Then to increase the strength there may be shrunk on each die an iron ring or metallic jacket. When all the operations described have been successfully performed, then these dies become "matrices" or "maternal dies." In general, they are never employed in striking coin but are used to produce duplicates of themselves in the following manner: A steel die, softened by annealing, flat at its base and obtusely conical at the top, is put in the bed of a die stamping press, and the matrix is forced down upon it by screw power until a copy is made in relief upon the soft steel. If one operation does not produce the desired effect, it is repeated until by a few touches from the engraver a perfectly satisfactory "punch" is obtained, and this being tempered and hardened serves to impress the design upon any desired number of dies for use in the coining presses.

We will next explore the mysteries of

The Assay Rooms

in the southwest corner of the second floor.

Here the nicest skill and learning of the scientists is necessary, and here is the starting point of all mint work, for every deposit, dust, or bar of gold or silver that comes into the institution must have its value determined, from a sample, by the assayer, before any further action is taken towards converting it into coin or paying its value to the owner.

The necromantic (magical) paraphernalia of these departments are bewildering to the unsophisticated, the calculations here made go far into the infinitesimal, scales are here that an infant's eyelash would turn the beam as quickly as would a pound. The smallest weight used in the Mint is here, the 13 100dths of a grain. Very sharp eyes can see it, without spectacles, when displayed on white paper in a very strong light.

The furnace of the assayer is a small upright stove in which is a "muffle," a wagon-shaped earthen vessel open at one end only, and having a few slits or vents in the top and sides. In this are placed "cupels," small crucibles made of bone-ash, which material while it is

not acted on by fused oxides, is sufficiently porous to absorb them. The use of the "muffle" is to protect the cupels from direct contact with the fuel and flames of the furnace.

To assay gold it must be entirely freed from any copper or silver, or both, that may be combined with it. A different process is required to eliminate each of these metals. To remove the copper, "cupellation" is first employed. In the cupel enclosed by the muffle, to the other metals is added lead, which under the heat of the assay furnace oxidizes, and promotes like change in the copper and other base metals drawing with itself all these into the pores of the cupel, leaving behind only gold and silver. When the "button" in the cupel has cooled it is taken out and hammered flat, then annealed by heat, next passed through rollers, again annealed, and screwed up into a roll. It is then purified by *quartation*. The silver is dissolved by action of nitric acid, and nothing but gold remains. But before this can be effected, it is necessary, in order to destroy all the silver, that sufficient of that metal must be added to make its proportion three-fourths that of the gold.

For assaying silver there are two methods — the "dry" or "furnace" assay or "cupellation," and the "wet" or "humid" or "volumetric."

The first process, similar to that described for gold, requires in the case of silver such nice regulation of temperature and so many precautions, and then it is so uncertain, that it is now only used in a subsidiary way to furnish an approximate result, or a basis for the closer and more delicate manipulation of the humid assay which with proper care and due attention to the condition of the liquid is regarded as a perfect system of analysis for silver and entirely reliable.

In the "humid" process, the proportion of fine silver in an alloy is determined by finding the exact amount of a known precipitant required to throw out the fine silver contained in a solution of given weight of the alloy, so that the result is obtained without a final weighing of the precipitated silver. The necessary amount of the precipitating agent being found, and the weight of the alloy being known, the number of parts of fine silver in a 1,000 is deduced by calculation. Nitric acid and a solution of common salt are the liquids employed.

The Separating Room

is also on the second floor, west side. Here is taken all the bullion in which gold or silver or both are combined with baser metals, and by the chemical process used by all refiners each element is separated before being sent to the melting room.

Official Headquarters

Leaving the Cabinet and before passing downstairs, we find on our right hand the office of the superintendent, where he receives visitors and transacts business. The next door opens into the chief clerk's sanctum, adjoining which is the studio of the chief engraver. At the foot of the stairs on the left is the coiner's private office.

Pursuing our investigation still further we descend to

The Cellar and Vaults

Of the latter there are quite a number, used for various purposes, beneath the building fronting on the corridor on Chestnut Street. In the main cellar immediately under the yard are six large boilers in which is generated the steam used in driving the engines and for heating the building. On the right are the blacksmith, carpenter, and paint shops, and in the rear is

The Medal Striking Department

A screw-press is invariably used to strike medals and also to produce the Proof examples of each new coinage which, being struck from entirely new dies (with a special mirror-like finish), present the brilliant, mirror-like surface so valued by collectors. Sets of each Proof striking are added to the Cabinet. Some are by official orders given to foreign governments or their representatives, and a few are sold at a slight premium to numismatists and connoisseurs.

The "Sweeps"

On the west side of the cellar is the "sweeps" grindingroom where all the sweepings of the institution are deposited and where at intervals they are ground into fine powder from which, by scientific manipulation, all the precious metal, amounting to a considerable value, is extracted and saved for the government.

The Wells

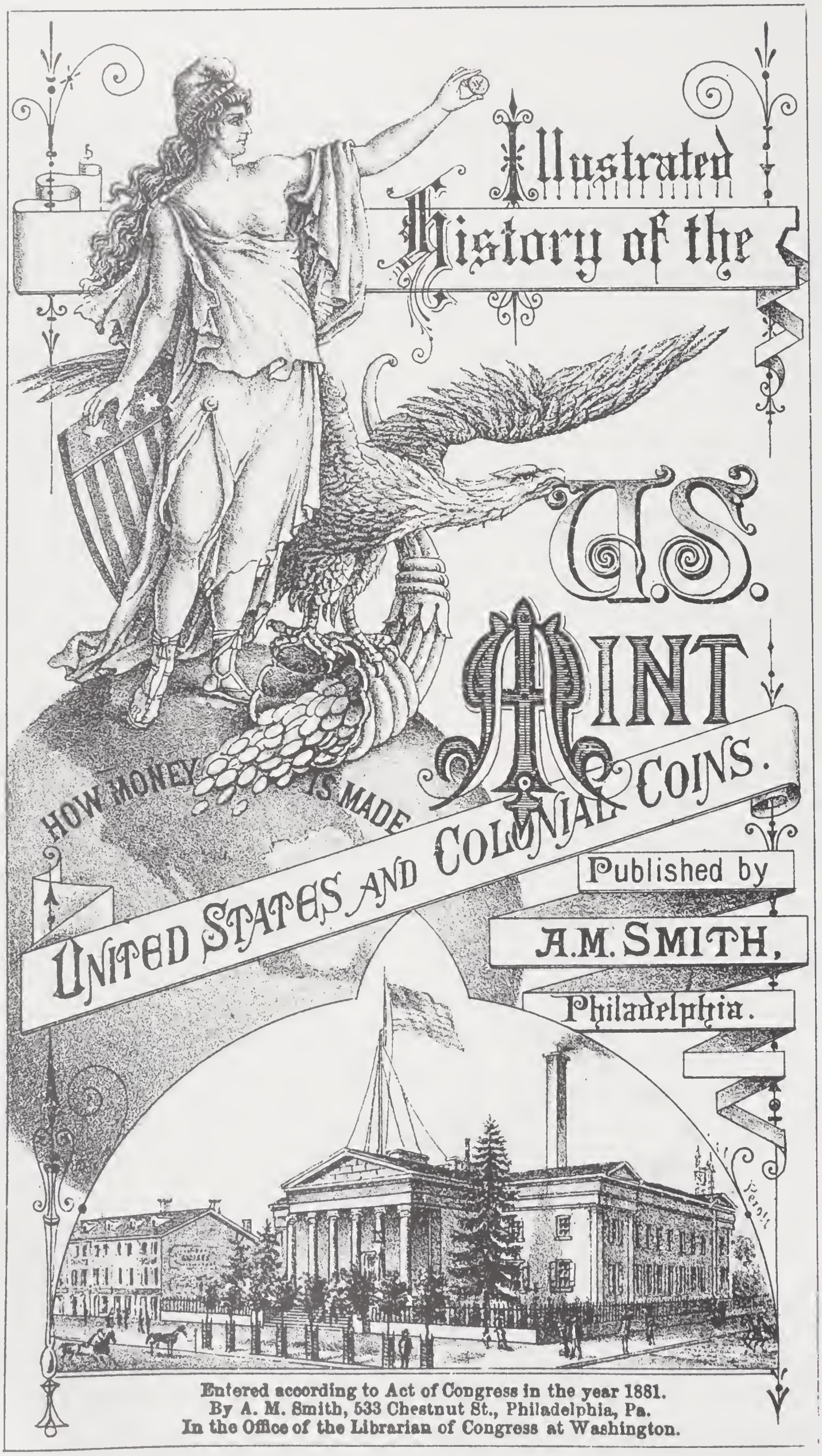
Even the water used in washing out the different rooms, the rain that falls upon the roof, must yield all gleanings before being permitted to escape. The wells receive and filter every drop, and when they are

cleaned, the deposits are treated in like manner, with the same results as the sweepings.

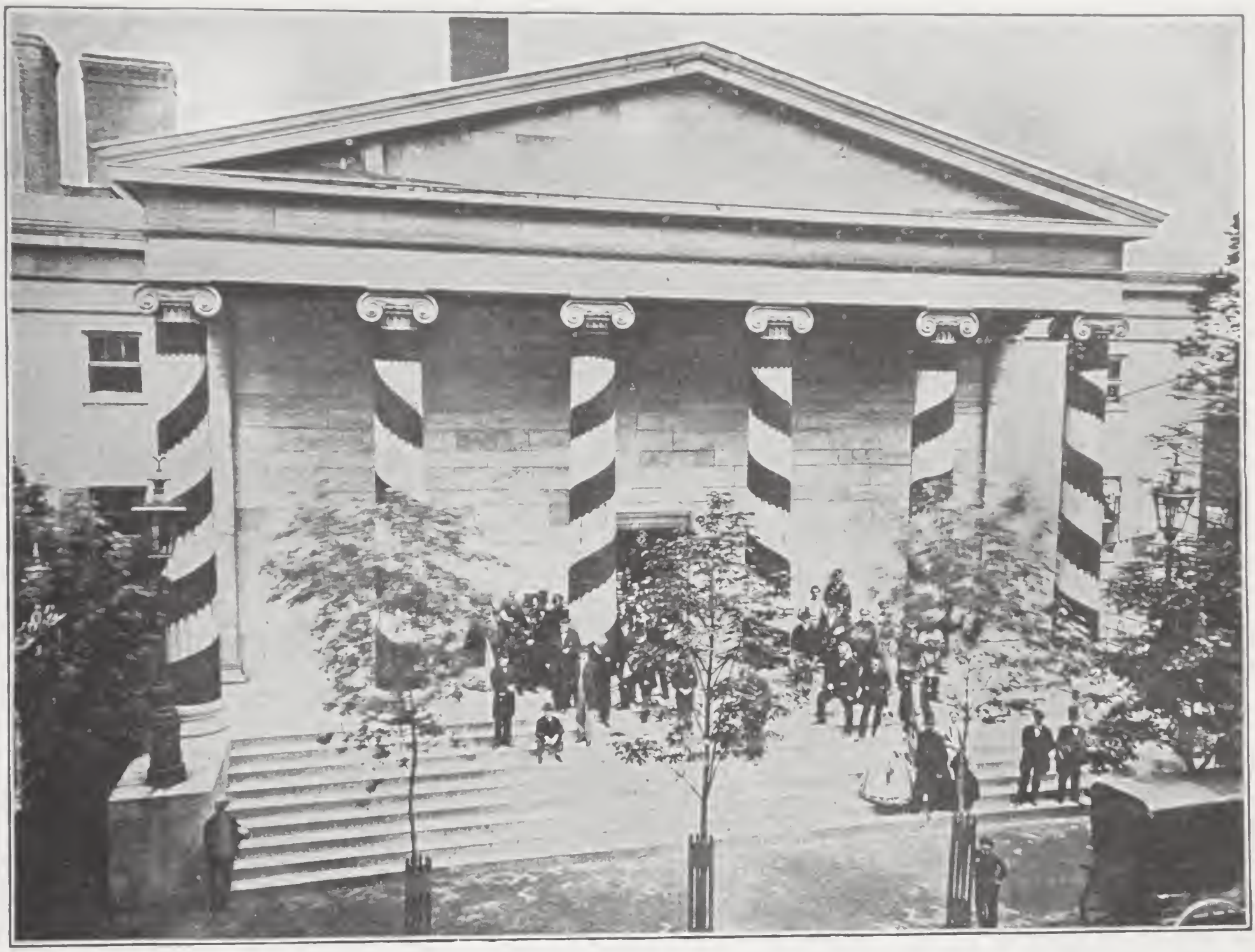
The Working Force

In the various departments of the United States Mint at Phildelphia there are employed, for work of every character, from superintendent to laborer, an average of over 300 men and women the year round. This force does more and better work, with less loss and larger profit for the government, than any like number of persons similarly employed in the world.

We have now completed our tour of the Philadelphia Mint.



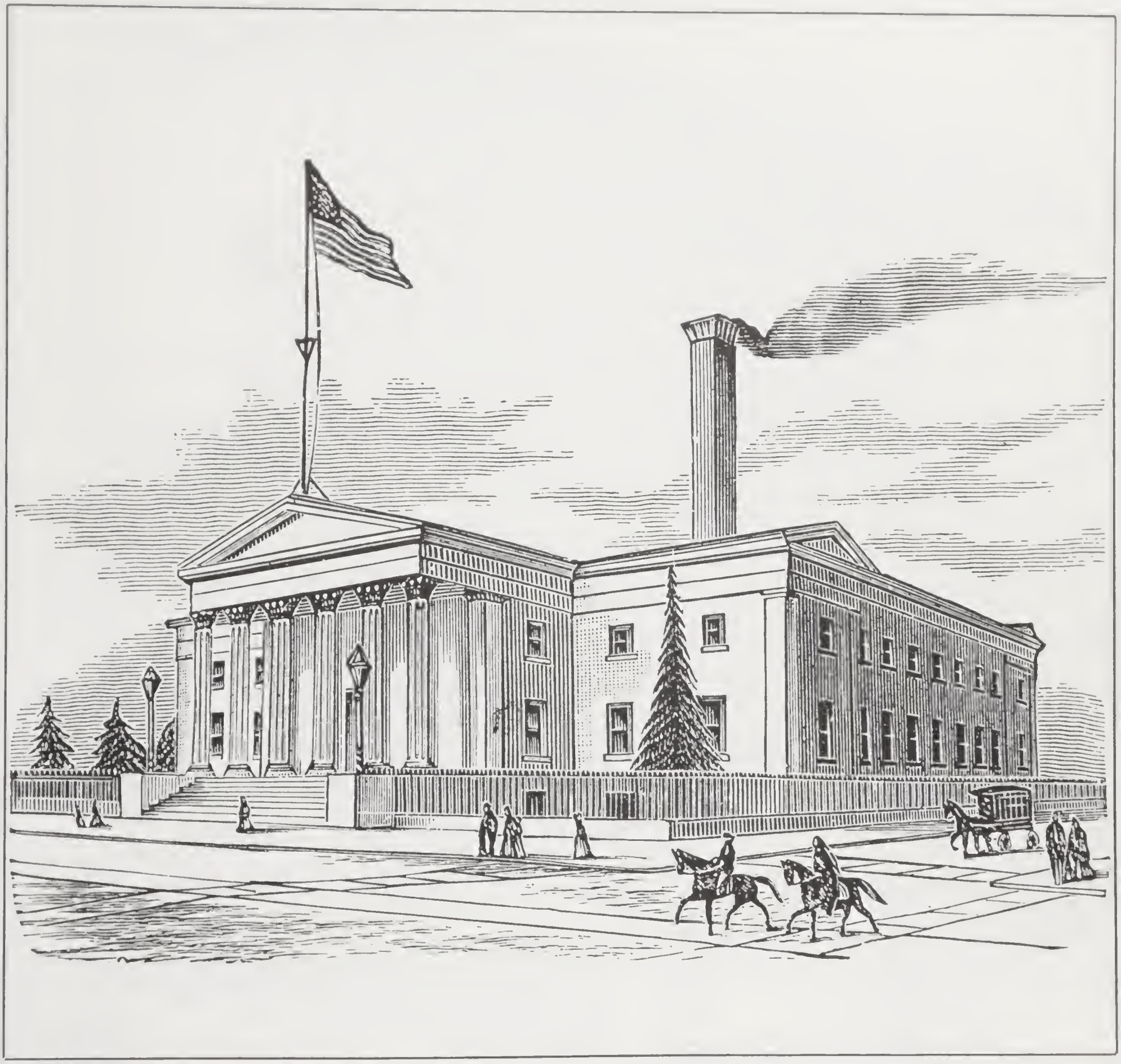
Cover of a history and guide to the Philadelphia Mint by A. M. Smith, 1881.
Later edition published in 1885.



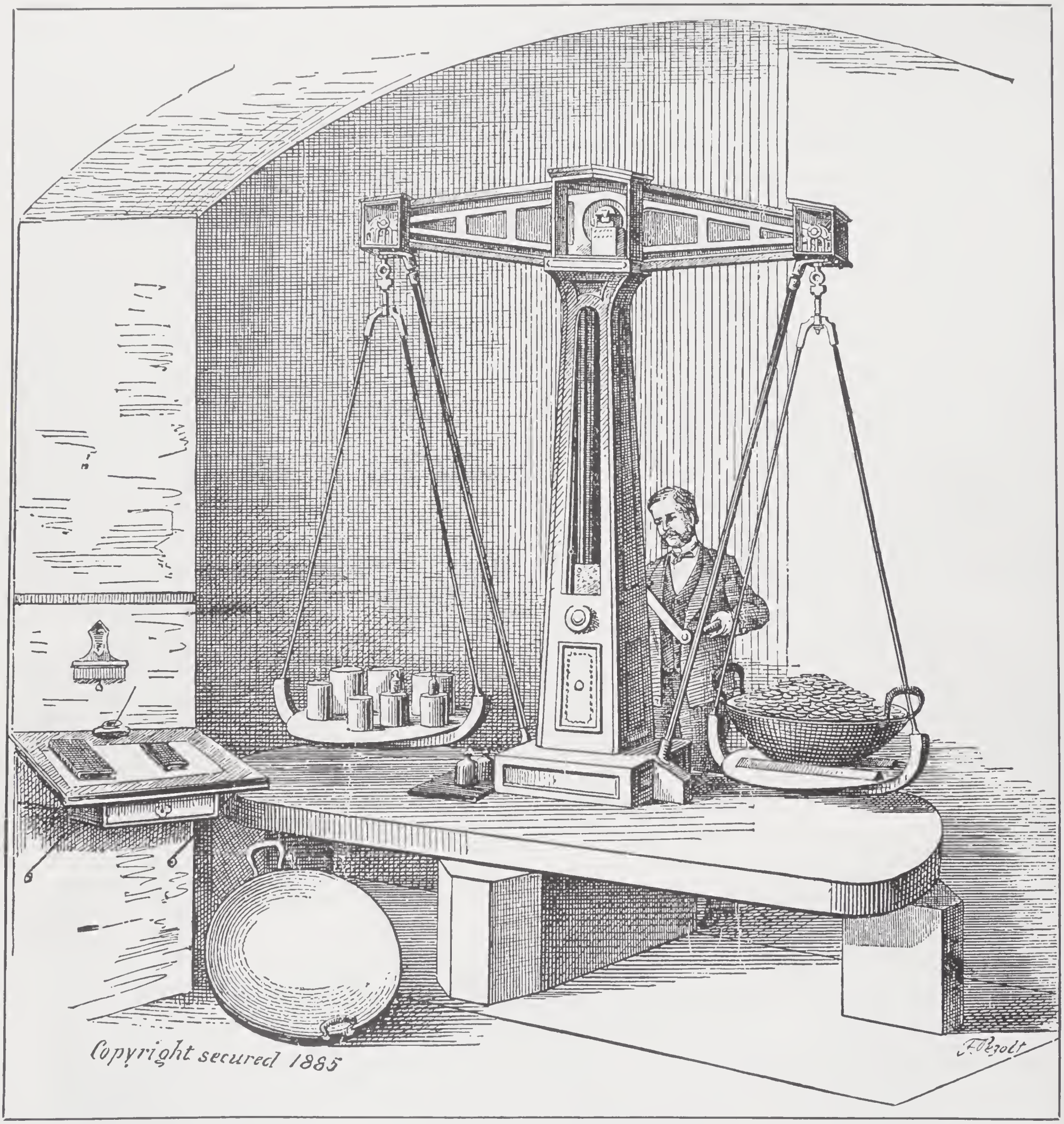
View of the second Philadelphia Mint (in use 1833-1901) at the time of Lincoln's death. The original caption with this photograph noted that "the man wearing a high hat and leaning against the pillar is Gov. Pollock, then director of the Mint. On his right is Prof. Booth, the melter and refiner."

The Deposit Weighing Room at the Philadelphia Mint, 1885. This and other 1885-dated engravings reproduced in the present volume are from "The Visitor's Guide to the United States Mint, Philadelphia, Pa.," published by A. M. Smith in the same year.

The drawing bench in use at the Philadelphia Mint, 1885. Metal strips from which planchets are later cut are passed through two precisely spaced metal cylinders, thus assuring the proper thickness.



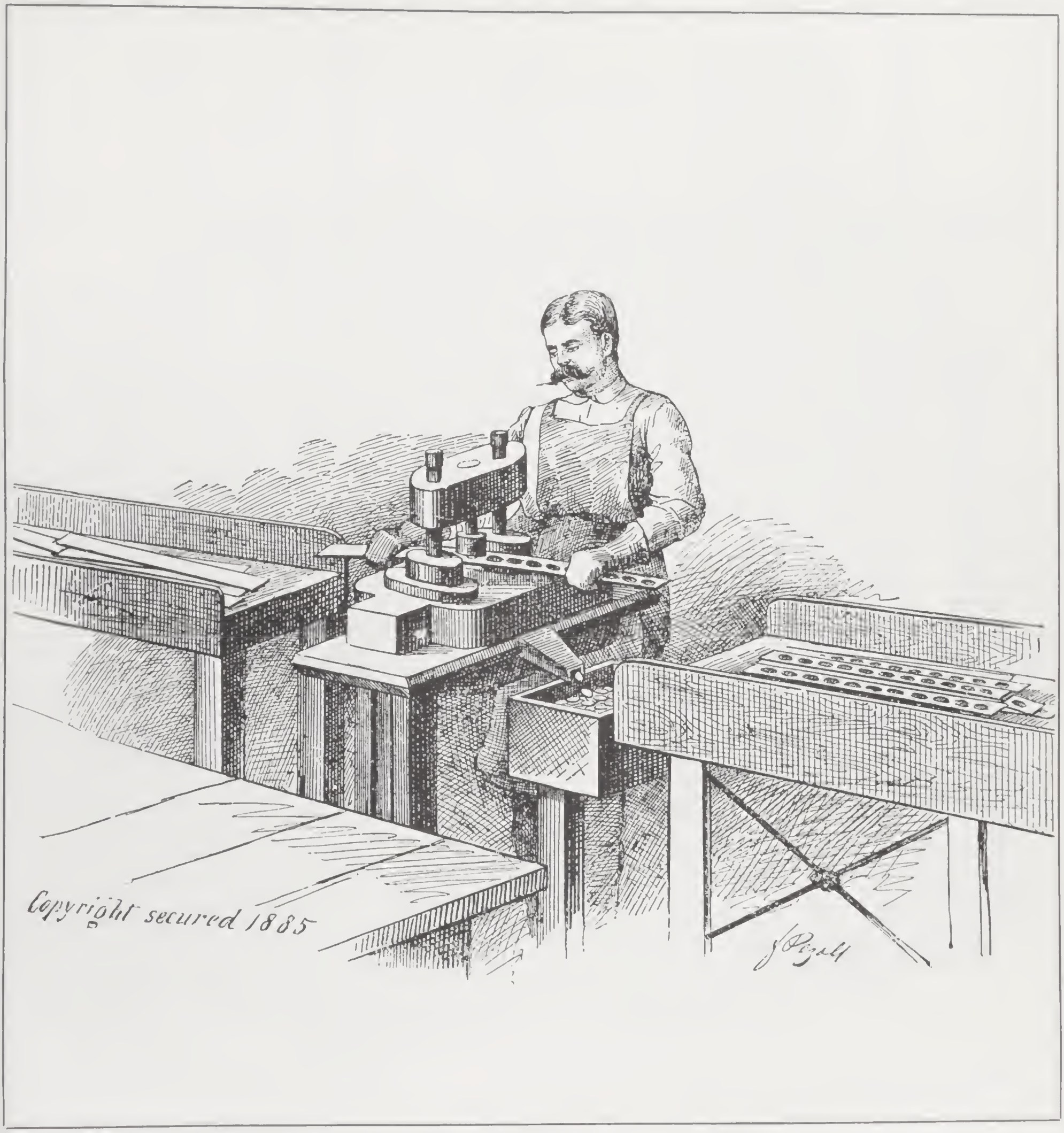
The Philadelphia Mint as it appeared in 1885. This structure, first occupied in the 1830s, brought to the American coinage system improved methods of operation, including steam power (introduced in December 1836). This building served until 1901, when it was replaced by the third U.S. Mint building which in turn was used through the late 1960s.



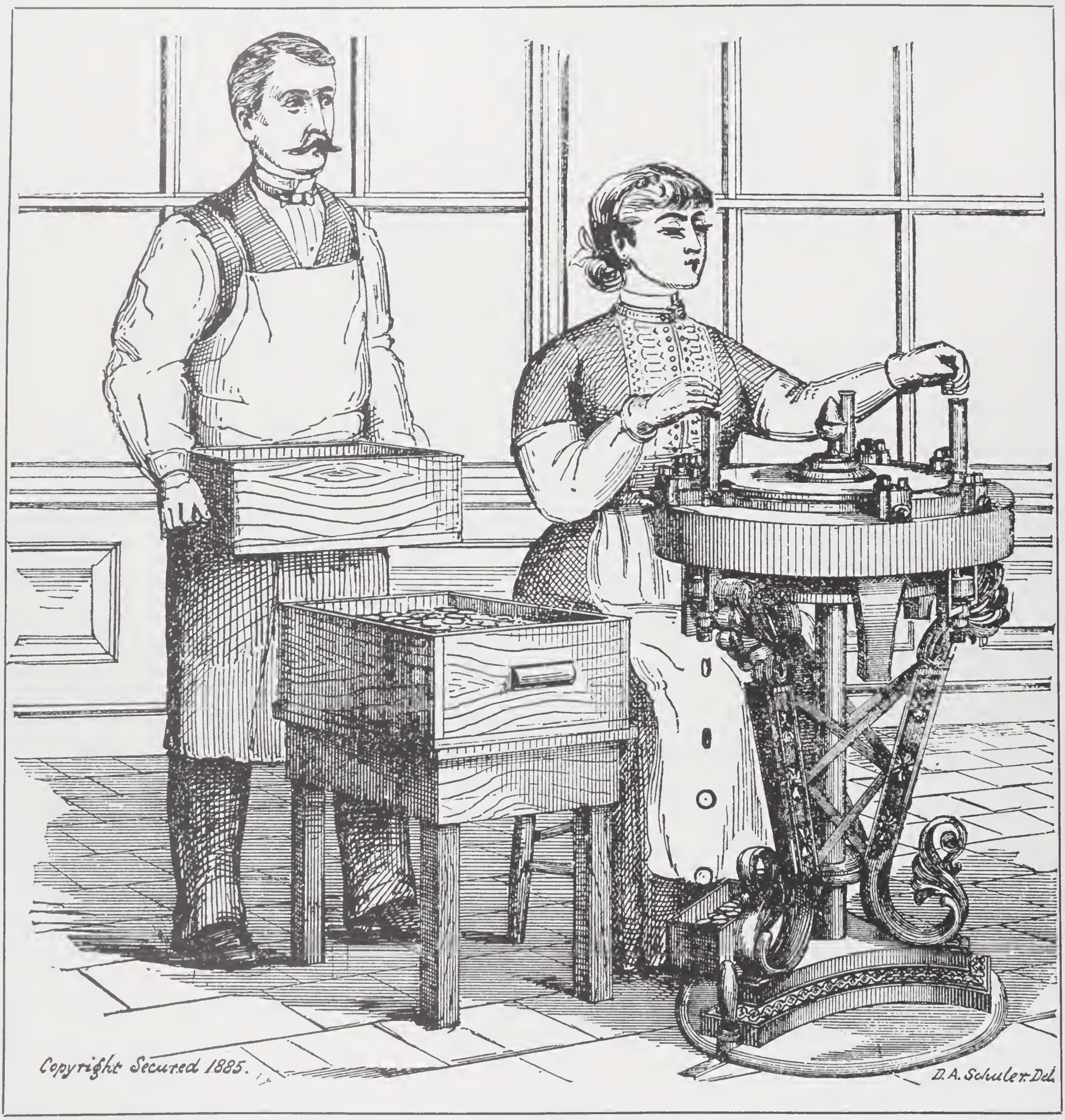
This pair of scales in the General Weighing Room at the Philadelphia Mint, 1885, was used to weigh gold and silver bullion at the time of receipt and again to weigh finished coin before delivery. The balance was described as "probably the largest and finest in the world." Its capacity was 10,000 troy ounces, or about 685 pounds, but it was sufficiently sensitive that even when loaded to full weight it was accurate to the one-hundredth part of an ounce.

An 1885 view of one of two rooms used for melting and refining at the Philadelphia Mint. In this room metals were melted, refined, and then provided with alloy in order to bring them up to the correct United States standards for coinage. In this view the worker at the left is ladling molten metal into moulds to create ingots or small bars about a foot in length, half an inch in thickness, and from one to two-and-a-half inches wide.

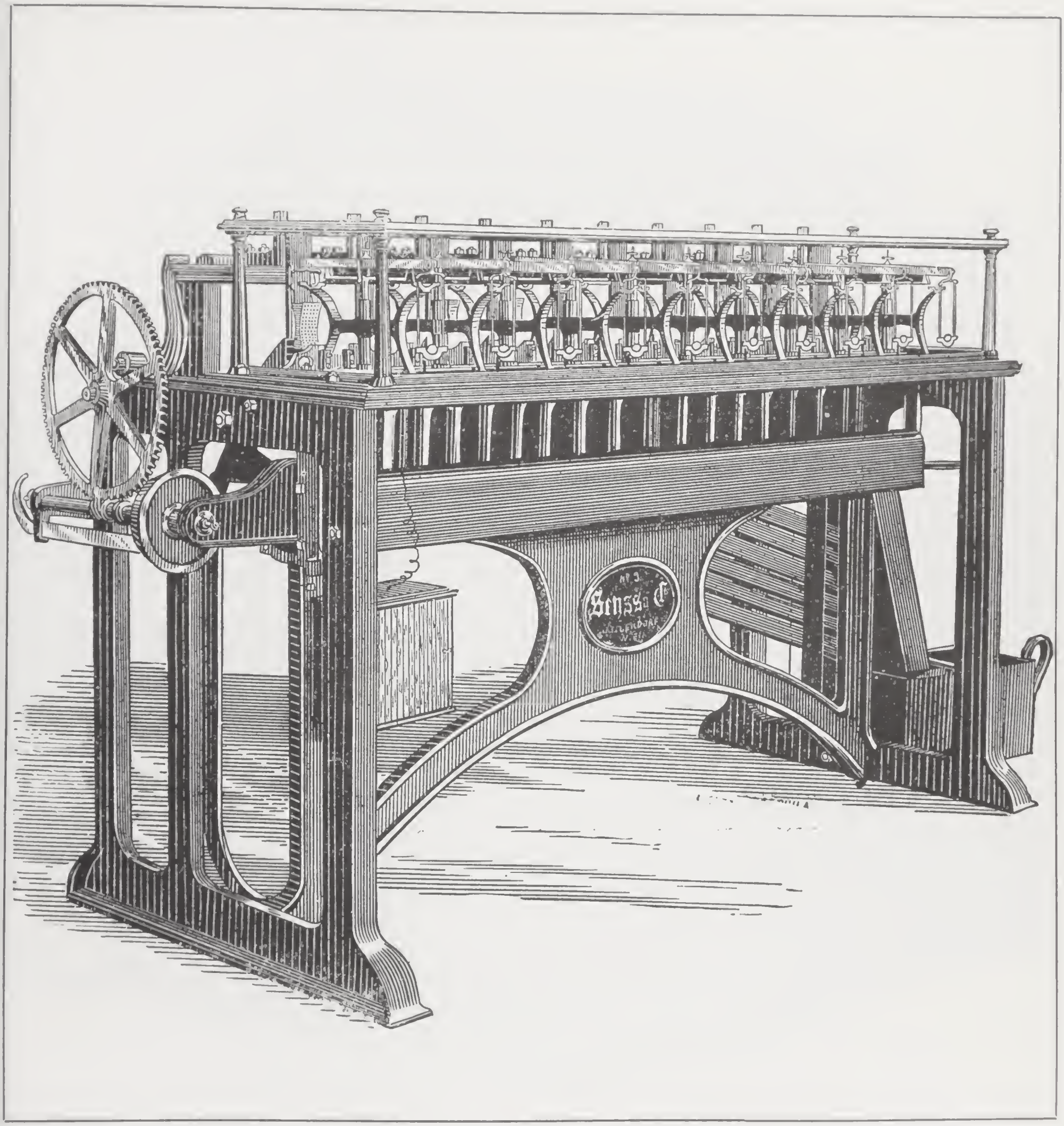
The rolling machine, as shown in this 1885 engraving, reduces the thickness and increases the width of metal strips. Starting as blunt ingots, the metal is passed through the rollers several times, each time with the rollers more closely spaced. To reduce a gold ingot to the proper thickness for coinage required, at the time, ten passes through the rollers, with intermediate annealing to soften the strip to prevent brittleness and breaking.



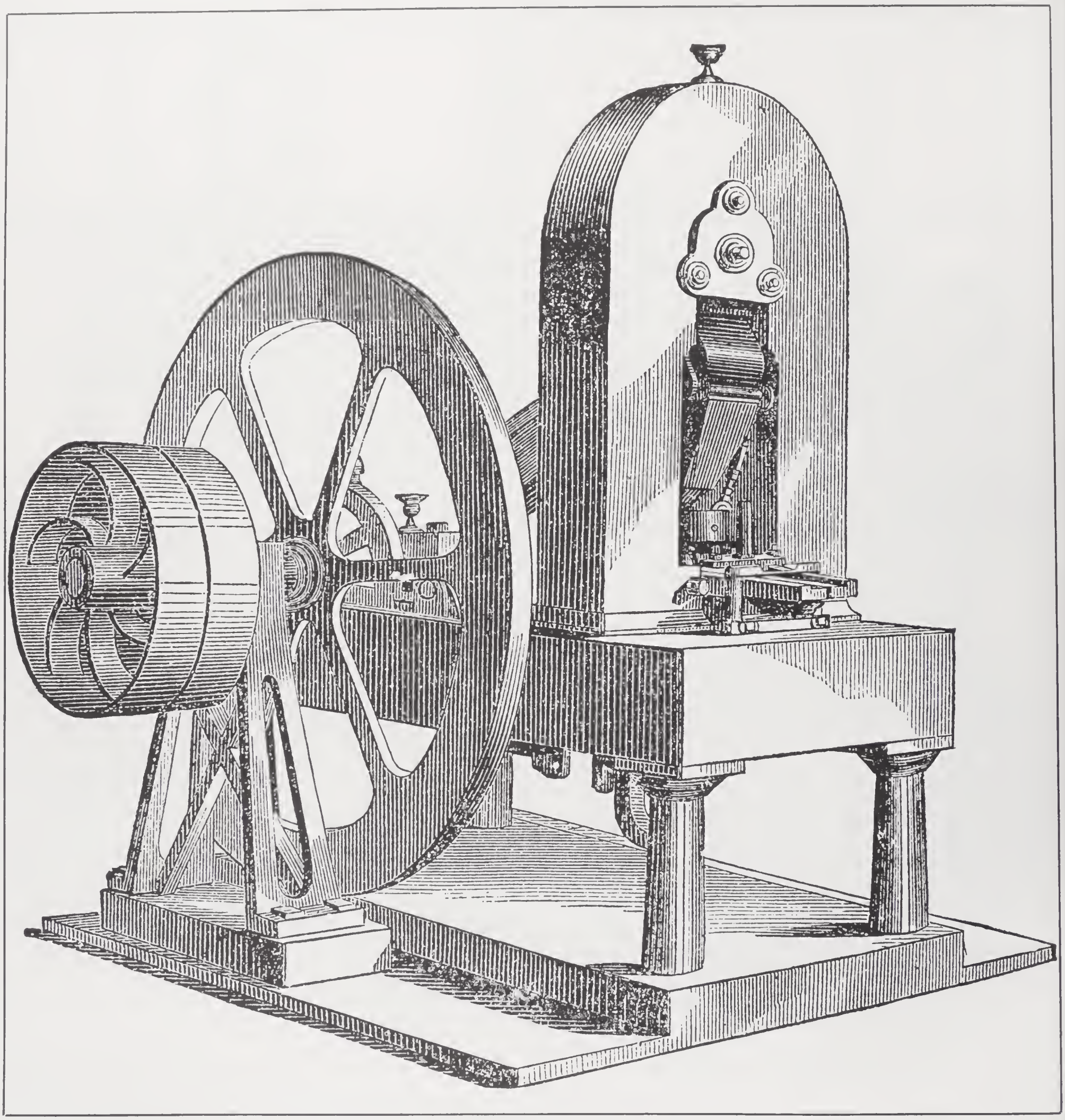
An engraving of the planchet-cutting press in use at the Philadelphia Mint, 1885. The establishment employed six such devices at the time. To the left are shown blank strips, properly rolled to the correct thickness. In the center the workman passes the strips through the punch press and creates planchets which are fed through a chute into a storage bin. He takes care to get as many planchets as possible from a single strip but at the same time to avoid partial or clipped planchets. On the bench to the right are used strips from which planchets have been cut. These strips are subsequently melted and the resultant metal is reintroduced into the coinage process.



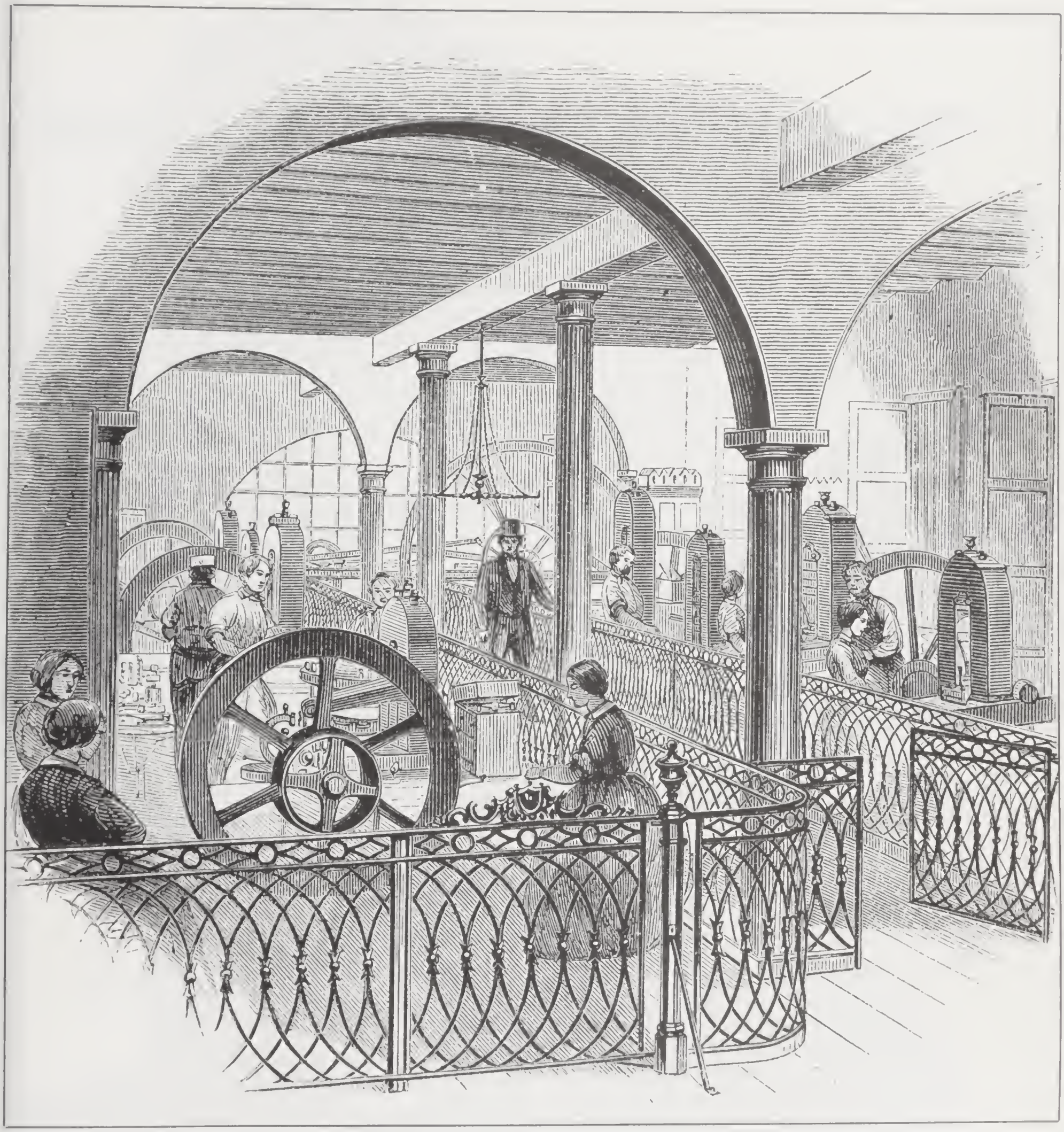
The milling machine in use at the Philadelphia Mint, 1885. Freshly-punched planchets are brought to the nearby table in wooden boxes. The plain discs are then stacked in a brass tube near the rim of the milling machine. Each disc is then tightly compressed between a revolving steel wheel and a fixed wall, with the aperture narrowing in diameter as the planchet travels along its path. The result is that displaced metal is formed up into a high rim on both sides of the planchet, a feature which facilitates the subsequent striking of coins, for not as much metal movement is required to fully strike up the raised rims on the finished product.



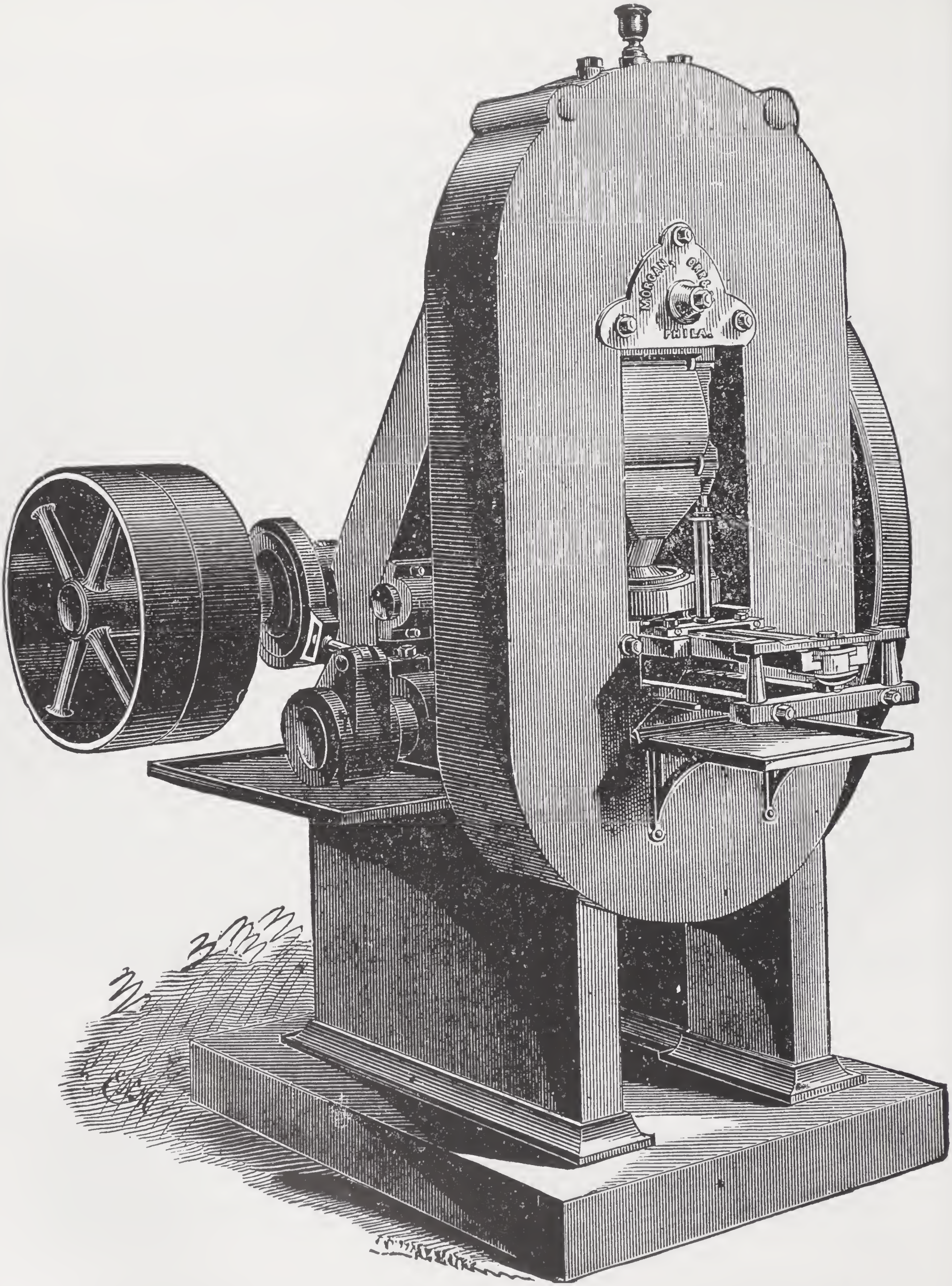
The electrically-operated Seyss Automatic Weighing Machine in use at the Philadelphia Mint during the late nineteenth century. By means of this device planchets were sorted into categories by weight.



Line engraving of a very early steam-powered coining press of the type first installed in the Philadelphia Mint during the autumn of 1836. Power was provided by a belt (not shown) attached to the drum or pulley at the left. The large cast iron fly wheel provided momentum and continuing force. Prior to the installation of such presses, coining was a hand operation performed by human labor. The Philadelphia Mint was a laggard in this respect, for in England steam had been employed for coinage decades earlier.



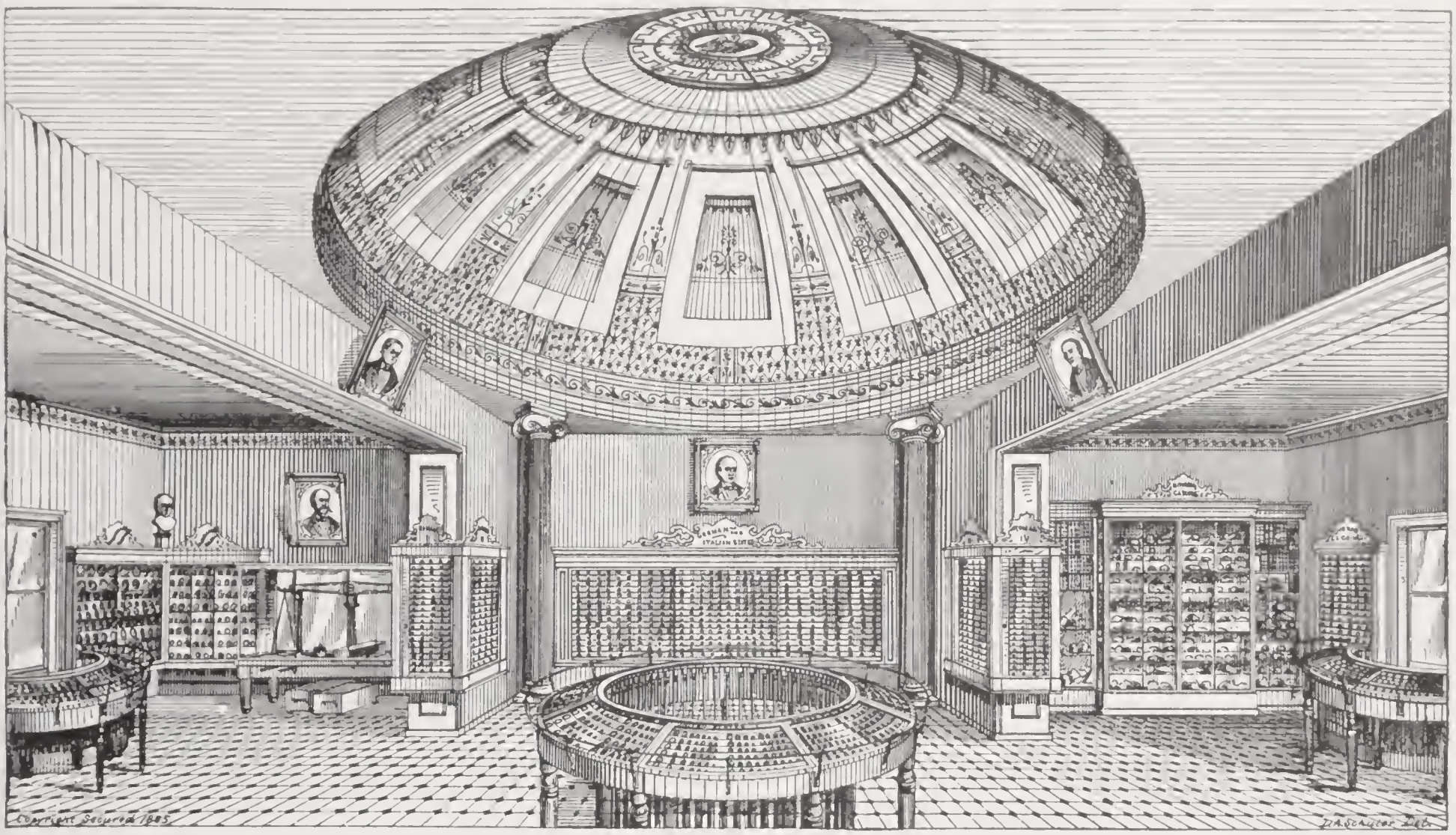
View of the Coining Room of the Philadelphia Mint as shown in "Harper's Monthly" magazine, December 1861. The subject of making money has always been a popular one with the public, and for this reason numerous publications printed features on the Philadelphia Mint over the years. Except for clothing styles and changes in the ornamental railings, a viewer to the same facility in 1885 or 1900 would see little difference from the vista shown above.



A "perfected coining press" of the 1885 era. The one shown here was produced by Morgan, Orr & Co., Philadelphia, although others were made by different firms. Certain of those used at Carson City were made in the machine shops of a nearby railroad! Although these presses became obsolete for regular coinage in later years, in 1965 during a coin shortage the United States Mint pressed a number of these units into service once again.

An 1885 view of the Coining Room at the Philadelphia Mint. Coins were struck by means of ten "perfected coining presses" of different sizes adapted for producing various denominations. Each press was capable of producing from 80 to 125 coins per minute and was operated by a lady attendant. During the same era similarly styled presses were used at the San Francisco, Carson City, and New Orleans mints. As "perfected" as the presses may have been in 1885, they became obsolete in later years. Today coinage is accomplished by high-speed electrically-powered presses which often use multiple die sets, striking in some instances two, four, or some other multiple of coins in a single operation. Still, a number of the early-style presses as shown here, but converted from steam to electric operation, are used today (1982) at the San Francisco coining facility to produce Proof issues for collectors. The slower speed of this type of press renders a sharper impression with finer detail.

A view of the Coining Room at the Philadelphia Mint as it appeared circa 1900. Electric lights provided illumination, but apart from this the processes were the same used decades earlier. (New York Public Library Collection)



The United States Mint Cabinet, or National Coin Collection, as it appeared in 1885. For years Adam Eckfeldt, who began the Cabinet in 1838, and William DuBois set aside Proof coins, territorial and private gold issues, medals, foreign and ancient coins, and other pieces of interest for the display. Numerous acquisitions were made by rescuing coins brought into the Mint as gold or silver bullion in an era in which little numismatic attention was paid to such items.

In 1839 Congress appropriated the sum of $1,000 for the Cabinet and after that time an annual stipend of $300 was given.

In 1893 significant portions of the Cabinet were displayed at the World's Columbian Exposition in Chicago. In later years the exhibit was relocated to the Smithsonian Institution in Washington. Today, under the curatorship of Dr. Vladimir Clain-Stefanelli, the National Coin Collection ranks as one of the foremost exhibits of its type in the world. Among United States gold coins the rarities contained are many. Two of the three known specimens of the 1822 half eagle, long regarded as America's most valuable gold coin issued for circulation, are included as are numerous Proofs of the various denominations, the unique 1849 pattern gold $20, two unique varieties of pattern 1877 round $50 "half union" coins, and many other pieces.

Although the collection is expertly cared for today by professionals, in the past this was not always the case. Early in the twentieth century when one numismatist commented unfavorably on the white film covering the Proof coins in the exhibit (the result of scrubbing the coins with silver polish) he was told by one employee who had been with the Mint for eight years that during his employment the coins had been cleaned four times.

COINAGE OPERATIONS.

By William F. Morgan.

Coiner of United States Mint at Philadelphia, Pa.

GOLD.

The ingots as received from the melter and refiner vary in size and weight according to the denomination of coin for which they are to be used. The following table gives the various sizes and approximate weights:

Denominations.	Approximate weight.	Length.	Thickness.	Width.
	Ounces.	*Inches.*	*Inches.*	*Inches.*
Double eagles	80	$12\frac{5}{8}$	$\frac{1}{2}$	$1\frac{1}{2}$
Eagles	62	$11\frac{15}{16}$	$\frac{1}{2}$	$1\frac{3}{16}$
Half eagles	40	12	$\frac{7}{16}$	$\frac{7}{8}$
Quarter eagles	33	$12\frac{1}{2}$	$\frac{7}{16}$	$\frac{11}{16}$

The first operation in converting ingots into coin, called "breaking down," is the passing of them between heavy rolls, which results in the ingot being formed into "strips."

To more clearly understand this, it may be said that the ingots are divided into drafts of from 40 to 60 ingots, and each draft passed between the "break-down" rolls a number of times, determined by the malleability of the metal. After each operation the rolls are tightened or brought closer together by means of wedges under the lower roll, which wedges are worked by means of a worm wheel. Such tightening of the rolls is shown by an indicator similar to a clock dial.

The following tables show the reduction of the ingot after each passage between the "break-down" rolls:

DOUBLE EAGLES.

Draft.	Dial indicator.	Length.	Thickness.	Width.
		Inches.	*Inches.*	*Inches.*
1	11.30	$14\frac{7}{16}$	$\frac{13}{32}$	$1\frac{33}{64}$
2	12.40	$15\frac{3}{4}$	$\frac{3}{8}$	$1\frac{17}{32}$
3	1.50	$17\frac{3}{8}$	$\frac{21}{64}$	$1\frac{17}{32}$
4	3	$19\frac{5}{8}$	$\frac{9}{32}$	$1\frac{9}{16}$
5	4.10	$22\frac{5}{8}$	$\frac{1}{4}$	$1\frac{9}{16}$
6	5.10	$26\frac{1}{4}$	$\frac{7}{32}$	$1\frac{9}{16}$
7	6.10	$31\frac{3}{8}$	$\frac{11}{64}$	$1\frac{19}{32}$
8	7	$35\frac{1}{2}$	$\frac{5}{32}$	$1\frac{19}{32}$
9	7.20	$39\frac{3}{4}$	$\frac{1}{8}$	$1\frac{19}{32}$

On this and the next several pages are facts and figures from the 1896 "Report of the Director of the Mint." Elsewhere in the report (not shown here) it is noted that the double eagle requires 175 tons of pressure on the dies in the press in order to bring all of the details into full sharpness. An eagle requires 120 tons, a half eagle 75 tons, and a quarter eagle 40 tons. Double eagles and eagles are struck at an average rate of 80 per minute, while half eagles and quarter eagles are struck at 100 per minute.

EAGLES.				
Draft.	Dial indicator.	Length.	Thickness.	Width.
		Inches.	*Inches.*	*Inches.*
1	12.30	$13\frac{3}{4}$	$\frac{13}{36}$	$1\frac{7}{32}$
2	1.45	$15\frac{7}{16}$	$\frac{23}{64}$	$1\frac{15}{64}$
3	3	$17\frac{3}{4}$	$\frac{5}{16}$	$1\frac{1}{4}$
4	4.15	$20\frac{15}{16}$	$\frac{17}{64}$	$1\frac{1}{4}$
5	5.30	$25\frac{3}{16}$	$\frac{13}{64}$	$1\frac{9}{32}$
6	6.45	$30\frac{7}{8}$	$\frac{11}{64}$	$1\frac{9}{32}$
7	7.40	$38\frac{1}{8}$	$\frac{9}{64}$	$1\frac{9}{32}$
8	8.15	46	$\frac{7}{64}$	$1\frac{19}{64}$
HALF EAGLES.				
1	12.45	$13\frac{3}{8}$	$\frac{3}{8}$	$\frac{15}{16}$
2	2	$14\frac{3}{4}$	$\frac{5}{16}$	$\frac{61}{64}$
3	3.15	$16\frac{9}{16}$	$\frac{9}{32}$	$\frac{63}{64}$
4	4.30	19	$\frac{15}{64}$	1
5	5.45	$22\frac{1}{2}$	$\frac{3}{16}$	$1\frac{1}{32}$
6	6.55	$26\frac{7}{8}$	$\frac{5}{32}$	$1\frac{1}{16}$
7	7.45	$32\frac{7}{8}$	$\frac{1}{8}$	$1\frac{5}{64}$
8	8.15	$37\frac{5}{8}$	$\frac{7}{64}$	$1\frac{5}{64}$
QUARTER EAGLES.				
1	12.45	$13\frac{7}{8}$	$\frac{23}{64}$	$\frac{33}{32}$
2	2	$15\frac{3}{8}$	$\frac{5}{16}$	$\frac{3}{4}$
3	3.15	$17\frac{1}{8}$	$\frac{17}{64}$	$\frac{25}{32}$
4	4.30	$19\frac{7}{8}$	$\frac{7}{32}$	$\frac{51}{64}$
5	5.45	24	$\frac{11}{64}$	$\frac{27}{32}$
6	6.55	$29\frac{5}{8}$	$\frac{9}{64}$	$\frac{55}{64}$
7	7.45	$37\frac{3}{8}$	$\frac{7}{64}$	$\frac{7}{8}$
8	8.15	$45\frac{3}{4}$	$\frac{5}{64}$	$\frac{29}{32}$

In "breaking down" ingots the metal becomes hard and springy, and further rolling than that indicated in the above tables, without softening, causes the strips to crack and split. To avoid this they are annealed as follows:

Inclosed in copper canisters, sealed with potters' clay to exclude air and thus prevent oxidation, the strips are placed in a furnace heated to about 1,500° F., where they remain for about one hour and a half, the time depending upon the heat of the furnace and the size of the strips.

After being cooled off in water, and each strip wiped dry, they are ready for further reduction in the finishing rolls.

Double eagles and eagles are passed through the finishing rolls three times, half eagles and quarter eagles four times, the dimensions of the resulting strips being shown in the following tables:

DOUBLE EAGLES.				
Draft.	Dial indicator.	Length.	Thickness.	Width.
		Inches.	*Inches.*	*Inches.*
1	7	$47\frac{3}{8}$	$\frac{7}{64}$	$1\frac{5}{8}$
2	7.50	$54\frac{1}{8}$	$\frac{3}{32}$	$1\frac{5}{8}$
3	7.50	$63\frac{1}{4}$	$\frac{5}{64}$	$1\frac{5}{8}$

EAGLES.				
Draft.	Dial indicator.	Length.	Thickness.	Width.
		Inches.	*Inches.*	*Inches.*
1	7.33	$56\frac{3}{4}$	$\frac{6}{64}$	$1\frac{19}{64}$
2	7.55	$66\frac{1}{2}$	$\frac{5}{64}$	$1\frac{19}{64}$
3	8.05	$78\frac{7}{16}$	$\frac{4}{64}$	$1\frac{19}{64}$
HALF EAGLES.				
1	7.30	$46\frac{3}{8}$	$\frac{5}{64}$	$1\frac{3}{32}$
2	7.50	$54\frac{13}{16}$	$\frac{1}{16}$	$1\frac{3}{32}$
3	8.10	$65\frac{3}{8}$	$\frac{1}{16}$	$1\frac{3}{32}$
4	8.20	$75\frac{1}{2}$	$\frac{3}{64}$	$1\frac{3}{32}$
QUARTER EAGLES.				
1	7.50	$52\frac{7}{8}$	$\frac{5}{64}$	$\frac{29}{32}$
2	8.05	$66\frac{1}{4}$	$\frac{1}{16}$	$\frac{59}{64}$
3	8.35	78	$\frac{3}{64}$	$\frac{59}{64}$
4	8.50	$94\frac{1}{2}$	$\frac{1}{32}$	$\frac{59}{64}$

It has been found impracticable to roll strips so as to give planchets of exact standard weight, and after leaving the finishing rolls the strips are of such thickness that planchets cut therefrom will vary from the standard weight as follows:

Denominations.	Grains heavy.
Double eagles	20 to 24
Eagles	10 12
Half eagles	6 8
Quarter eagles	4 5

This excess of weight is reduced by the "draw benches."

The strips upon leaving the finishing rolls are again annealed, cut in two for convenience in handling, and taken to the pointing rolls that about $1\frac{1}{2}$ inches of the end may be pointed or flattened to permit their easy passage through the dies of the draw bench, and they are then greased with tallow.

The draw benches are double, each section being independent in its action of the other. Each section has two dies regulated by set screws; between these dies the pointed end of the strip is passed, and being seized by the jaws of the carriage, which is drawn by means of an endless chain, the strip is drawn through and reduced as near as may be to standard weight. This operation is similar to that of wire drawing.

When the strips are drawn to the proper weight, which is ascertained by weighing sample planchets cut from either end, they are taken to the cutting shears and the pointed ends cut off to avoid the possibility of a planchet being cut out of the same. This done, the strips are taken to the cutting press, and by means of a steel punch, working into a matrix, the planchets are cut therefrom.

The planchets, together with the resulting perforated strips, spoiled pieces, and chips, are taken to the wash room and thoroughly cleansed of the grease by washing in a lye compound of soap, borax, and water. After rinsing in clean water they are dried in a large copper pan which is heated by steam. The planchets are then taken to the selecting tables and all perfect blanks separated from the imperfect ones, chips, etc. The latter, together with the perforated strips, are returned to the melter and refiner to be remelted, while the former are sent to the adjusting room.

The standard or legal weight of gold coin is:

Denominations.	Grains.
Double eagle	516
Eagle	258
Half eagle	129
Quarter eagle	64.5

The tolerance allowed by law on individual pieces is:

Denominations.	Grains.
Double eagle	0.50
Eagle	.50
Half eagle	.25
Quarter eagle	.25

Each piece is weighed in the adjusting room, and if found to be heavier than the legal limit, is reduced within the limit by filing the edge of the planchet; if lighter than the legal limit, it is condemned and returned to the melter and refiner to be remelted.

Those planchets which have been adjusted are then taken to the milling machines to undergo the operation of having the raised edge (technically termed "milling") put on them. The milling protects the surface of the coin from abrasion.

In the milling machines the planchets are fed by hand into a vertical tube, and, one by one, are caused to rotate in a horizontal plane in a groove formed on one side by a revolving wheel and on the other by a fixed segment of corresponding groove. Each piece as it passes through this narrow groove has its edge evenly forced up into a border or rim.

The milled pieces are then taken to the cleaning room to be cleaned. To facilitate the cleaning, as well as to soften the pieces for the imprint of the dies, they are again annealed by heating to a cherry red, then dipped into a solution of sulphuric acid and water sufficiently strong to clean and brighten them.

After being thoroughly rinsed in boiling water they are hand riddled in sawdust to dry them, and are then ready for the stamping press.

The most important operation in the stamping of a piece is the adjustment of the dies in the press. This adjustment requires great skill and long experience, much depending upon the character of the metal to be operated upon.

The pieces are fed to the press through a vertical tube, and as each piece reaches the bottom of the tube steel feeders carry it over between the dies, place it in a steel collar, when the dies close upon the planchet and the obverse and reverse impressions are made.

The inner rim of the collar is reeded or fluted, and the planchet before being struck is slightly less in diameter than the collar; but the pressure upon the dies causes the piece to expand in the collar and takes from it the reeding on its edge.

A 1903 Visit to the Third Philadelphia Mint

The following information is excerpted from a booklet, "The United States Mint at Philadelphia," by James Rankin Young, published in 1903 and sold to visitors to the third Philadelphia Mint (which opened for business in 1901, although it was not until 1903 that all facilities were completely in place).

The following excerpts represent material not covered elsewhere in the present volume. The Young 1903 publication contained much basic information in addition to that extracted here.

A Historical Sketch

As a result of the Act of 1792, a plot of ground was purchased in Philadelphia, located at the east side of Seventh Street, below Arch Street. An old still-house that had stood on the site was removed and in its place was constructed the third building for government use erected by the United States government. The first government building was erected at the Lazaretto, on Tinicum Island, in the Delaware River, near the lower part of Philadelphia. This was used for quarantine purposes; and a second, built at Chelsea, Massachusetts, as a marine hospital. [This is a significant deviation from the usually published information that the 1792 Mint building was the first structure erected by the new government. — Ed.] The original Mint building still stands, numbers 37 and 39 North Seventh Street, an unnoticed though remarkable historic edifice. Within almost a stone's throw stood, until a few years ago, the building in which Jefferson wrote the Declaration of Independence.

The first coinage authorized by Congress was an issue of copper cents and half cents in 1793. For that purpose the first invoice of copper consisted of six pounds, where today tons of that metal are received every month. The copper used in the early minting operations was imported from Europe, as was all the minting machinery used at that period.

Up to 1816, all Mint operations were done by hand or horse power. In that year steam was introduced. [But it would not be until 1836 that steam was used to operate coining presses. — Ed.] In the Assayer's Department today, the assayer, Jacob R. Eckfeldt, whose ancestors have been connected with the Mint since 1795, shows a small screw press a little larger than a letter press, which it resembles. This was the original coining press. It is now used to press the little ash cupels used in assaying. In 1836, when Robert M. Patterson was director of the Mint, the first coining press run by steam was installed. It was a machine, weighing about three tons and having a coinage capacity of 100 pieces per minute, which had been invented by M. Thonnelier in France three years before, and was built by Merrick, Agnew & Tyler, of Philadelphia. In 1858 it was remodeled by David Gilbert. This press has also become a relic and is owned by Mr. G. B. Soley, of the Engraver's Department. The 25 coining presses now used are supposed to be the best designed machines in the Mint and represent the gradual development of a press installed in 1874. Since 1899 experiments have been regularly conducted aiming at improvements in the various minting processes. The results of this spirit of enterprise are visible today in every department.

For 40 years the federal government continued to use the old building on Seventh Street as the National Mint. These 40 years had seen giant strides made in our commercial development, and the necessity arose for a larger Mint to meet the demand for more money. On the Fourth of July, 1829, the cornerstone was laid for a new Mint on the northwest corner of Chestnut and Juniper streets at a cost of $281,000. Of this amount, $31,666 was paid for the site. In 1902, this property was sold by the government for $2,000,000. For over 70 years this simple edifice, with its half dozen plain Ionic columns, was a landmark in Philadelphia. Again, however, despite the fact that this "mother mint" had now a progeny in various parts of the country, the nation's growth demanded that the minting facilities at Philadelphia be enlarged. The subject was agitated for many years before any action of a definite character was taken.

At the beginning of the third year of the administration of Benjamin Harrison (1891), the secretary of the Treasury, William Windom, in a report to Congress, called attention to the fact that the business done at the Mint at Philadelphia had grown beyond the capacity of that establishment, and he recommended that immediate provision be made for the erection of a building that should not only meet current requirements, but those for many years to come. Opposition to the proposal came from persons who believed that the new structure would cost too much or who believed that it should be relocated to New York City, St. Louis, or some other location. Finally the present location in Philadelphia was agreed upon, the block bounded by Sixteenth and Seventeenth and Spring Garden and Buttonwood streets, having the main front on Spring Garden Street.

The New Mint Building

The first and lasting impression given by the new Mint building was one of beauty and strength. The classic lines of the Roman Ionic architecture lending themselves very aptly to the huge blocks of granite to accomplish this affect. This impression is again pointedly brought to view by the massive bronze door with the lions' heads moulded on them that are set in three graceful arches at the head of the broad flight of stairs leading to the main entrance on Spring Garden Street. The ground area covered by the building contains 58,000 square feet.

The main lobby, reached by the Spring Garden Street entrance, is finished with strongly veined Italian marble, with vaulted mosaic ceilings. The wall panels, formed by the vaulted ceilings above the marble sides, are pictorially treated with glass mosaics. They are a unique example of the American development of the arts and crafts. The ceilings are covered with a solid mosaic of gold.

To the right on entering the lobby is the visitor's waiting room. Directly opposite is the guides' room. Every few minutes one of the guides conducts a group of visitors through the building, explaining the various operations, finally leaving them to inspect the coins and curios in the cabinet at their leisure.

Many curious experiences are related by the guides. It is by no means infrequent for these men to receive inquiries regarding the days on which sample coins are given away. The courteous reply is generally, "The 30th of February." Many visitors also have the idea that they must be searched before leaving the building, and present themselves for this purpose to the attendant at the door. An instance is related of a woman of portly build who presented herself to the chief of the guides and said she was ready to be weighed. That embarrassed gentleman, in confusion as to whether she wanted to test the scales or simply see how much she weighed, finally found out that she understood every visitor must be weighed before leaving the building, in order to discover whether or not he or she had any precious metals secreted about his or her person!

Broad vaulted corridors extend east and west from the lobby, giving access to the first floor. On the west corridor are the superintendent's offices and the coiner's offices, the stairway at the end leading down into the coining room. On the east corridor are the deposit rooms, the cashier's offices, and the melter and refiner's offices, the stairway at this end giving access to the melting room. At the first landing, half way to the second floor, is the main entrance to the numismatic room. This room is situated on a mezzanine floor, being half way between the first and second floors of the rear portion of the building, and is arranged for the exhibition of a large collection of coins and medals of all kinds now held at the Mint.

On the second floor on the main staircase we see the white corridor, a beautiful effect at the head of the stairways formed by a series of marble columns. Directly over the entrance corridor is a room in which the Assay Commission meets every year. In the east corridor are the rooms of the superintendent of machinery and in the west corridor are the rooms of the engraver. Over these, on the third floor, are the sewing room, dining room, and assayer's rooms.

In the rear portion of the building are the more strictly working departments of the Mint, as the melting rooms, machine shops, rolling mills, annealing furnaces, refining rooms, adjusting rooms, and the coining presses. In the basement are boiler rooms, engine rooms, gas and power plants, storeroom, etc., and also immense storage vaults, where at the present time are stored several hundred millions of silver dollars, besides a considerable quantity of gold bullion and subsidiary coin. The entire building cost $2,025,000. Of this amount $329,338.71 was paid for the site and incidental expenses. The general contractor for the superstructure and finishing of the building was Charles McCaul, of Philadelphia, his bid being about $1,500,000. The supervising architects were William Martin Aiken, under whom the preliminary sketches were started, and James Knox Taylor, under whose direction the working drawings were prepared and the work carried on to completion.

The Coining of the Money

The bullion is received at the deposit or weighing room, where it is weighed and the depositor paid according to an assay which is made of a part of the deposit. This bullion is taken to the refiner, who separates the precious metals into masses of pure metal. These are transferred to the melting room, where they are melted, alloyed and cast into ingot bars. Again the metal is assayed, after which, if it is of the legal fineness, it is rolled into long ribbons in powerful rolling machines, from which the blanks or planchets are stamped by the cutting presses. The

blanks are weighed and adjusted, and those of the weight fixed by law are raised around the edge and cleaned. On these finished blanks the coin is stamped. They are then weighed, counted, packed into bags, and transferred to the cashier ready to be issued.

It may be of interest to describe some of the various departments:

All of the precious metals brought to the Mint go first to the deposit or weighing room. The deposit is weighed on delicate scales in the depositor's presence and a receipt with the deposit number on it is given to him. The deposit is then placed in a strong box under double lock and kept entirely separate until after it is melted, assayed, and the exact value ascertained, based on the weight after melting. On the third day after making his deposit, the depositor returns and is paid. Deposits of gold are paid in gold coins or bars; if the deposit also contains silver, the value of such silver will be paid to the depositor in silver coins at the price fixed by the director of the Mint.

Gold is received at the Mint in the form of bars, lumps, grains, or dust, in their native state, free from earth and stone, or nearly so, and amalgam with the quicksilver expelled. Foreign coin, defaced United States coin, United States coin issued before 1834, and United States coin abraded beyond one-half percent for 20 years' circulation are also received. No silver is now bought by the government, except such as is mixed with the gold and the bullion deposits. Base bullion containing less than 300 parts of gold per thousand will be refused. Deposits of less value than $100 and bullion unsuitable for operations at the Mint may be refused. Filled or plated ware is not accepted. Where base metals are present, as in jewelry and dentists' plate the deposit is subject to loss in refining. An ounce troy of pure gold is worth $20.67. In native gold it would take from six to eight ounces to produce a value of $100.

Most of the gold received at the Mint comes as bullion pigs, looking like large metal bricks, from the different assay offices of the government. Practically all the nickel comes from the mines at the Gap, in Lancaster County, Pennsylvania, and the copper from the Lake Superior mines. The nickel and copper is received already refined, stamped and milled, ready to have the design stamped on it by the coining presses, making it coin.

All the old coins that have been redeemed by the Sub-Treasuries are brought here and weighed. There is about $5,000,000 worth of these old coins redeemed in a year.

After the metal is weighed by the deposit officer it is placed, with the deposit number, in a metal box under double lock and transferred to the next adjoining room in this corridor — the deposit melting room. This is a room about 20 feet square, in which the most salient features are three furnaces, a small grinding mill, and some acid tanks. Each deposit is processed separately until the depositor has been paid for it.

The Melting and Refining Department, employing about 75 skilled men, refines the gold and silver bullion, melts it, adds the alloy, casts it into ingot bars and hands these over to the coiner ready for the process of rolling.

In the parting room gold and silver are separated. These two metals possess a strange affinity for each other. It is the object of the refiner to separate them and remove any base metals that may also be present in the bullion, so that he can turn over to the melter bars that are 998 or 999 parts in a thousand pure metal. There are three processes used to accomplish the separation — the sulphuric acid process, yielding gold that is about 992 to 996 fine; the nitric acid process, which is rather more expensive, but gives gold 997 to 999 fine; and the electrolytic process, which, while the cheapest of any, gives gold that is 999.5 to 999.9 fine. The sulphuric acid process is used at the New York and San Francisco refineries, but not in the Philadelphia Mint. Here the nitric acid process is mainly used, although an electrolytic plant for parting gold has been installed recently.

In order to make it hard enough to stand the wear and tear of usage as coin it has been found necessary to alloy some other metal with the gold and silver. Our government requires that the standard coin be composed of 900 parts of gold, or silver, and 100 parts of pure copper. A very slight variation, a fraction of one percent, is allowed. The alloying of metals and the casting into ingot bars is done in the melting room.

There are 16 furnaces used in this operation, each furnace containing but one crucible, or melt, at a time. A gold melt will contain about 6,000 ounces, valued at $130,000, and is maintained at a temperature of 2,000 degrees. It takes about three quarters of an hour to properly fuse the metals. Five melts are made in one furnace today, where previously there were four. 13 of the 16 furnaces burn naptha gas, an improve-

ment over the coal furnaces used in the old Mint.

The molten metal is slowly poured into upright molds, of which some twenty are placed in a shallow iron pan near the furnace. As metal touches the mold the grease, with which it has been rubbed like the butter on a bread pan, burns in a little flame. When the mold is filled it is passed on to a helper who opens it and throws out the two red hot ingots. These are chilled in a tank of water and dipped into a very weak solution of sulphuric acid. The "gate" end of the ingot is then cut off in a "topping machine," and the little fringe left along the parting line of the mold is filed off by hand. The bars are so cast that they are slightly pointed at one end that they may be easily fed into the rolling machines. After the ingots are finished they are piled on trucks and stamped with the melt number ready for transfer to the coiner. Before leaving the melter, however, an assay must be made of every melt. If it is not of the required 900 parts fine it is condemned and melted over again. In the case of gold a small chip of the metal is sent to the assayer.

When the melter has completed the ingot bars and the assayer has passed on them as of proper fineness, they are taken to the transfer weigh room, the same room in which the bulky deposits are weighed. The ingot bars are placed on scales and a record is kept of the amount of metal. The ingots are then turned over to the coiner.

The next step toward the finished coin after the ingot of standard metal has been made is to roll the bar into strips of the proper thickness and cut from them the blanks or planchets. The bars are reduced to strips of the proper size on the rolling mills alone, the old draw bench being done away with. There are two types of mills, the breakdown mills, through which the ingots are first run, and the finishing mills, which roll the strips to the required size. There are six of the former machines, each equipped directly with a 50 horsepower motor, and three of the latter, which are run by motors of less power.

The ingots are carried in trucks to the face of one of the breakdown machines and fed one at a time by the operator between the chilled iron rolls. If two should happen to be fed at once a switch is automatically thrown, immediately stopping the machine and thereby saving it from what would necessarily be great damage. The rolls can be adjusted by means of a clock dial on the front of the machine to five ten thousandths of an inch.

It is not strange that a great molecular change is apparent after an ingot has been run through a mill eight or ten times. It becomes very brittle. To restore its ductility the strip is annealed in one of the strip annealing furnaces. After the strips are annealed they are returned and rolled several times more in the finishing rolls. Sample blanks are struck from the ribbons of metal, and if these are of the proper weight the rolling process is ended. After the strips have been rolled to the proper thickness they are cut into shorter strips in order that they may be more easily handled. This is done on the powerful multiple shears which are capable of cutting 10 gold or silver strips at a time. The finished strips are now fed into the cutting presses which punch out the blanks or planchets on which the coin is to be stamped. The eight presses used here were designed and built into the Mint's machine shop. A single machine will cut 173 blanks in a minute. In the case of quarters and dimes, which are stamped twice in a double row, there would be stamped twice this number.

Connected with the rolling room, and situated between it and the transfer weigh room, is one of several steel vaults used by the various departments in storing metals in transit from one department to another. On the shelves around the inside of this room are piles of ingots ready for rolling. This stranger picks up a bar about the size of a thick foot rule, though a good deal heavier, and is told that it is fine gold worth about $1,400 and that double eagles will be made from it. Here is another, slightly narrower, from which eagles will be coined. It is valued at $1,000, and so on, the half eagle ingot being worth $750, and the quarter eagle ingot $575.00. Hundreds of thousands of dollars' worth of ingots pass through this storeroom daily.

After being stamped out in the cutting presses the planchets are weighed by the coiner and sent to the selecting tables. Here a half dozen employees pick from the mass of blanks all that have rough or nicked edges, flattened sides, or any other apparent defects. Seated at a small desk or table the operator spreads out a handful of the blanks, and with remarkable rapidity segregates the imperfect blanks and pushes them into a slot in the table, while the perfect blanks are put into another slot. The condemned blanks are returned to the melter while those approved are taken into an adjoining room, where they are fed into a machine that automatically sorts them

One of the most interesting of the many wonderful inventions to be seen in the machinery at the Mint are the six automatic weighing or sorting machines which were designed in Austria over 20 years ago. [The description at this point indicates that this machine in 1903 was used only for silver coins; gold coins were processed by hand, as noted by the following description. — Ed.]

In the adjusting room on the western side of the third floor of the working portion of the building are some 60 women, seated at tables in long rows, each before a fine balance, weighing and adjusting blanks and coins. The blanks are weighed by the operator, and if found slightly heavy are filed a little from the edge until they are made the proper weight. If they are too light, or too heavy for filing, they are placed in a separate can to be returned to the melter. Finished coins are also brought back to this department and reweighed to guard against the issue of any coin that might be of false weight. At the end of each day the filings made by each employee are collected, weighed, and sent to the melter.

It has been found that when a rim has been raised around the edge of a coin the surface of the face is protected from abrasion and the life of the coin lengthened. The little edge, or collar, is generally, though as the superintendent of machinery points out, incorrectly, called the milling. The edges rolled up in what should be called the upsetting machine, a machine that was redesigned and built in the Mint's shop. It is a circular machine standing about as high as one's waist and run by a vertical motor in the lower part. The blanks are fed into two tubes at either end of the diameter of a circular steel plate which is about two feet across. A little feeder pushes the coin in between two grooves, one in a plate revolving in the center of the machine, the other in the outside stationary plate. The blank makes about three revolutions in these grooves then is dropped out. It will be seen that the pressure on its edges has raised a circular edge around the disc. There are nine upsetting machines in the new Mint, one for each coin minted, excepting pennies and nickels, the blanks for which are received already upset. The old mills had several sets of grooves in a single mill for coins of different denominations.

After being upset the coins are practically ready for the coining press, being of the proper fineness and standard weight. However, all the handling the blanks have been subjected to in the selecting, weighing, adjusting, and upsetting has made them soiled and dirty. To clean the coins, and to make sure that the metal in them has not become too hard or tough to work, the blanks are thoroughly cleansed and annealed. This is done in the whitening room.

The annealing is done in a machine called the rotary annealer. The blanks or planchets, which have been brought here on trucks from the upsetting machines, are fed into the top of the furnace, which is cylindrical in shape and which stands about six feet from the store. The coins are moved through six feet of flame, to the back of the furnace, here they drop and commence the journey back again, finally following into a large metal basket beneath the furnace. In the case of gold the blanks are dropped directly into water and an excess of gas is used to prevent oxidation. There are two rotary annealers, capable of annealing 100,000 silver dollar blanks in eight hours.

To clean the blanks they are dipped in a tank of weak sulphuric acid and dried in a machine called a revolving riddle. In this machine the planchets are heated and rolled around in bass wood sawdust, a large box of which is below the riddle. This wood is used as it has been found to have less rosin in it than any other. The discs are run down through a current of dry hot air through an open part of the machine and are poured out bright and shining. The whitened planchets are then ready to receive the government stamp to make them money.

Coins of all denominations are made at the Philadelphia Mint. All the nickel and bronze pieces used in the United States are made here, alone amounting to over a hundred million pieces in a year. [It was not until 1908 that cents were first struck at a branch mint and not until 1912 that nickels were struck elsewhere. — Ed.] The stamping of the design on the coins is done on the 25 coining presses in the western side of the building on the second floor. An idea of the comparative work of this Mint is gained by the fact that there are more presses here than in all the other government mints together. Until recently there were but nine other coining presses. Ten new presses were installed when the Mint was moved into its new quarters. These presses, together with two of the powerful rolling mills, were built at the shops of the T. C. Dill Machine Co. in Philadelphia.

The dies are adjusted in the coining press by a skilled operator, the adjustment requiring the services

of a man of long experience. The blanks are then fed into a tube at the front of the machine. In doing this the women who feed the machines shake the blanks in the palm of their hands, getting them in a column ready to go into the tubes, and incidentally detecting any false or nicked blanks that may have escaped the vigilance of the workers at the selecting tables. A pair of mechanical fingers takes the disc from the bottom of the feed tube and carries it between the upper and lower die, where it is held in position by a collar, the inner edges of which are grooved. The stamp then descends. The obverse of the coin is struck on the top of the blank and the reverse on the lower side. The pressure flattens the coin out, squeezing it into the grooves in the collar and making the delicate reeding seen on the coins. The reeding is intended to prevent any of the metal from being filed off without detection. When the pressure is released the lower die forces the coin out of the collar and fingers force it back into its channel, at the same time carrying a new blank into the collar. Despite the fact that many tons of pressure are put in each coin stamped, the whole operation is done in a moment, and from 80 to 100 coins are thrown into the can at the bottom of the machine every minute. The quarter dollars and coins above this denomination are stamped at the rate of 90 per minute. Lesser denominations are stamped at the rate of 100 per minute.

At present the following approximate pressures are used to strike the various denominations, with the actual pressure varying from coining press to coining press: double eagle 155 tons, eagle 110, half eagle 60, quarter eagle 35, silver dollar 160, half dollar 98, quarter dollar 60, dime 35, nickel 60, cent 40.

After the coin has been finished it is again taken to the adjusting room where any piece that deviates from the standard weight more than is legally allowed is set aside and sent to the melter. One step more, however, is required before the government will issue the coin as money. This is the test for resonance, or ringing. Partitioned off from the bustle of the adjusting room is a small room where two women sit dropping the coins rapidly, one after the other, on a metal plate. It may be that some one of the coins has a bubble or hollow spot inside, and yet has passed the test of weighing, being larger or denser than the average. If such a defect exists it will be detected at once by its false ring and set aside. Every silver dollar coined is rung in this way and defective ones are occasionally found.

Before turning the finished money over to the cashier it has all to be counted and packed in bags with the amount stamped on them. All the gold coinage, and the silver dollars, are counted by hand, the coin being piled in stacks on the counting tables. The minor subsidiary coins are counted on the counting boards.

The gold coin is put up in bags of $5,000 each. This amount of gold should weigh 268.75 troy ounces. If the coins put in a bag, however, were all "lights," this amount would not be reached. The law requires that the weight of such a bag be within one-hundredth of an ounce of being this amount. The counter, therefore, has to mix the "lights," "heavies," and "standards" in such proportion that the legal weight for each bag is reached. On an average day the counting department will weigh and count $140,000 worth of money. After it has been counted and packed in bags it is stored in the counting room vault ready for transfer to the cashier and issued to the public.

The channel through which the newly minted coins pass from government control to public use is the cashier's office. With doors that are self-locking, windows that are guarded with wire netting, and vaults finished with the most approved burglar-defying doors, the office seems impregnable.

When the coiner is ready to make a delivery of new coins, he notifies the cashier. Before the coins are accepted it is the duty of the last-named official, acting for the superintendent, to ascertain, by weighing a number of pieces taken indiscriminately from the delivery, whether the coins are within the legal limits of the standard weight. If the weights are correct the coins are ready for distribution. To learn whether the coins are of proper fineness pieces are also reserved for the Assay Commission, appointed annually by the president. Scientific examination by these experts invariably proves that the gold or silver is of legal fineness. For the work done the cashier has two office assistants, a shipping clerk, and five or six packers. The demands for new gold and silver coins principally from the sub-treasuries throughout the country, their vaults being constantly replenished from the Mint's great stores.

Visitors to the Mint invariably find their way to the cashier's office before leaving the building. The visit is not complete unless some newly-minted coins are carried away as "souvenirs," the bright cent generally catching the fancy of the stranger. The favorite coin

though, is the quarter eagle, the little gold piece being in particular demand for Christmas and school presents. Occasionally a happy-looking young male asks for "a bright new double eagle," and it is safe to say it shortly after warms the palms of an officiating minister at someone's wedding.

Other Mint Departments

All the dies used at coining in all the United States mints are made at the Philadelphia Mint. The staff makes on the average 1,600 or 1,700 dies in a year and has made as high as 2,500 dies in that time. Many of the dies are, of course, dies for coins, many of which are stamped from a 'hub,' although all the dies for the government medals are also engraved by this department. One might wonder what the government needs with so many dies, but when we consider that the average silver dollar die can be only used to strike 150,000 coins, and that these coins are struck at the rate of 90 every minute, we see that a new die will be needed every four or five days. The life of a die varies with the metal and the size of the coin it is to stamp.

While all the dies for all the mints are made here, those intended for the outside mints have a small mark on them, signifying the mint from which the coin is to be issued.

There are two systems used in engraving dies. The older and simpler method of engraving directly on a steel face is used mainly in making dies for medals. The coinage dies and the more artistic medal dies are made by the use of the reducing lathe and the "hubbing" process.

The former process, that of hand engraving directly on the steel face, started by selecting the block of steel that is to be the die and putting a true face on it. So fine is this work of facing that, attached to his lathe the turner has an adjustable magnifying glass which he constantly uses while truing the surface. The engraver makes a copy of the design to be engraved and the exact size it is to be in the finished piece. This is drawn in lead pencil and transferred to the face of the steel cylinder by putting a coat of wax over the latter, and then rubbing the lead of the drawing on it. The faint lines are then gone over with a fine graving tool to make them permanent.

The engraver then cuts out the metal, forming the design in intaglio, so that when a coin is struck the figure will stand out in relief. From time to time as he goes along he tests his work by making impressions of the same on a lump of wax. If any part can be done better in relief, this part of the die is softened and stamped into another piece of steel that is softened. The relief part is added and this piece of steel is in turn hardened and stamped into a softened block of steel, which when hardened is the finished die.

The second and more modern process is commenced by the engraver making a model of the design in wax about three or four times the size of the coin or medal. An electrotype is then made of the model, and fixed rigidly with sealing wax on the face of the reducing lathe, a wonderful little $10,000 machine.

The reducing lathe will make an exact reproduction of the electrotype, of the same size or smaller according to the way in which it is regulated. A long arm extends out over the electrotype. For every movement made with this point, sideways, up or down, forward or backward, a similar movement is made by a second point near the head of the machine. This second point is in the form of a drill and consequently cuts out the reproduction of the large model the exact size wanted. So fine is the adjustment of this little drill that it is almost impossible to tell whether it is revolving or not, even when a piece of metal is held against the point of it. The points or drills are made on a small machine next to the lathe. The piece of steel with the reduced design on it is called the "hub."

Some parts of the design, like the date of the year, do not appear on the "hub" because the hub is used from year to year. The central design, however, stands out boldly as in the finished coin.

A piece of steel is then annealed and softened in one of the four annealing ovens and is trued on the lathe. The "hub" is hardened and its impression struck on the annealed steel. This process, called "hubbing," is repeated a number of times. When the impression is sharp enough, the die is hardened and the temper drawn. The die is then taken to the engraver, examined and recorded. An interesting exhibit in the engraving room is the original design of the silver dollar with Liberty seated. It is about a foot in diameter and is colored brown and white.

In a single room in the southern end of the second floor of the building is the medal room, a department under the coiner though almost an independent mint in itself. All the "Proof" coins (those given a particularly fine finish) and medals are made in this room. On one side of the room is a small furnace and melting

pot where melts can be made if necessary. On the other side of this furnace is an annealing oven. In the center of the room is a large cutting press, which will cut dies up to four inches in diameter. Against the wall are two electrically driven hydraulic presses, capable respectively of a pressure of 400 and 300 tons to the square inch, and next to them the two hydraulic pumps. In the basement this department has a huge press capable of giving 1,100 tons pressure to the square inch. This is used on the largest dies, those four inches in diameter. Out in an out-of-the-way corner is the old-fashioned hand screw press, with its long arms and heavy weights. The foreman, growing reminiscent, tells how, as a helper, he used to get these arms going round at such a gait that they would move the whole machine.

The Proof sets of coins are made under the government supervision to be preserved for record or sold to collectors. The face of the dies used in stamping these sets have been given an extra fine finish and glisten as though they had been nickel-plated. The blanks for coins are annealed and stamped by the hydraulic press. The operator then gives them a thorough acid bath and polishes them singly with a handful of wet sand.

Certain medals may be given a deep bronze finish or clouded over by sandblasting. The latter device is accomplished by a small wooden box with glass sides. A pipe on the inside blows down a fine shower of sand. The operator, wearing a big pair of mitts to protect his hands, holds the coin into this stream of sand until the operation is finished, when it has a delicate frosted appearance. [Sandblasting was used for medals at this time; later it was used for Proof coins, but in 1903 regular Proof coins had the traditional mirrorlike surface. — Ed.]

The six men in this department are kept constantly busy and accomplish a surprising amount of work. Besides the many Proof sets of coins and government medals they stamp and finish a great many medals for different colleges and societies.

The business office of the medal department is in a room on the right hand side of the corridor as you enter the Cabinet. Proof sets of the half dozen silver and minor coins are sold for $2.50, while Proof sets of the four gold coins cost $38.50. Any one of the gold coins can be bought at a premium of 25 cents, and a Proof nickel and cent may be had for eight cents, but the Proof sets of silver coins will not be separated.

For the storing of millions of dollars' worth of bullion, coins, blanks, and dies, the Mint is provided in different parts of the building with twenty steel-lined vaults. The steel used in the vaults would weigh about 3,250,000 pounds. The largest of these vaults, eight in number, are located in the basement. Two of these, the silver dollar vault and the cashier's working vault, are classed among the largest of their kind in the world. Each is divided by steel gratings into compartments, which are sealed as soon as filled with the boxes full of coins. This is done in order to avoid a continual reweighing and recounting of their contents. That this is no light task is shown on the change of superintendents. The money then accounted for by the outgoing official has all to be counted. For this purpose the director at Washington details a special deputy and force of men who are kept busy in the vaults counting for several months before their work has ended.

The silver dollar vault, the largest of all, is 100 feet long, 52 feet wide, and 10½ feet high. 112 million dollars can be stored in it! The next largest vault is the cashier's working vault, where the coins of various denominations are stored prior to their shipment. It is 80 feet long, 52 feet wide, and 10½ feet high. The remaining six vaults, used for storing gold, bullion, bars, etc., are combined 122 feet long, 21 feet wide, and 10½ feet high. Three of these open into each other, having but one entrance, and the other three have a separate entrance. Armed guards patrol the area ways around the vaults every night and on Sundays. The day of the watchman and his faithful dog has passed on the Mint's record with the death penalty for embezzling coin, and the allowance of "drink money" to the employees.

On completing the tour of the building the visitor is left by the guides in the Cabinet where he may inspect Uncle Sam's collection of rare coins at his leisure. This octagonal hall is one of the most beautiful architectural features of the building. Every detail is finished with the greatest elegance. The brass chandelier, hanging from the center of the dome, is a graceful piece of art and cost $3,000. The coin cases are made of highly polished mahogany, while the floors are covered with an appropriate design in marble mosaic.

A mine of historical knowledge, covering the whole world for centuries, is to be found in this collection of 11,000 coins and 2,300 medals. The degree of

a nation's civilization, its progress in the arts and sciences, may be readily discovered through its coins. In one of the cases will be seen the crude efforts at coinage of the semi-civilized African tribes, while in contrast to them are the delicate coins of the highly cultured Greeks. The historical epochs of a country can clearly be followed in a large and well arranged collection such as this. The coins are arranged by countries and placed in chronological order. The oldest coins in the collection are three silver pieces of Aegina stamped in Greece about 700 B. C. The smallest gold coin is one issued by the Free City of Nuremburg, A. D. 1522-1532. It is the 1/32nd of a square ducat and had a value at the time of about 7¼ cents.

The collection of American coins in the Cabinet is, naturally, the most complete in the world. Here is the double eagle of 1849, the only coin of that denomination struck during that year; and the half eagles of 1815 and 1822, both of exceedingly high numismatic value and rarity. Specimens will be found here of all gold, silver, nickel, and bronze pieces issued from the Mint.

NEW UNITED STATES MINT AT PHILADELPHIA

1903 view of the third Philadelphia Mint, a structure which began operations in 1901 and which replaced the earlier facility which had been in use since 1833. The third Philadelphia Mint continued operations until the late 1960s.

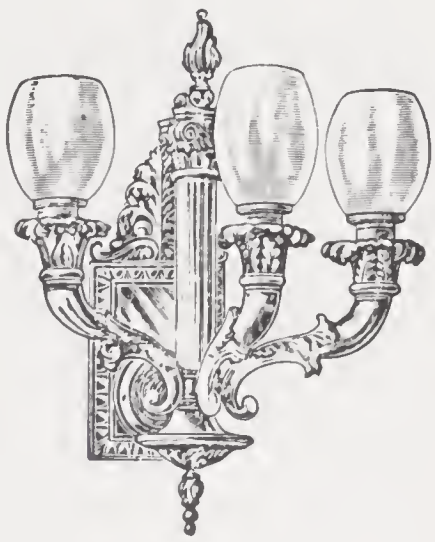
THE CHAS. McCAUL CO.

U. S. MINT, PHILADELPHIA

CONTRACTORS AND BUILDERS

10 NORTH 11TH STREET, PHILADELPHIA, PA.

CASSIDY & SON MFG. CO.



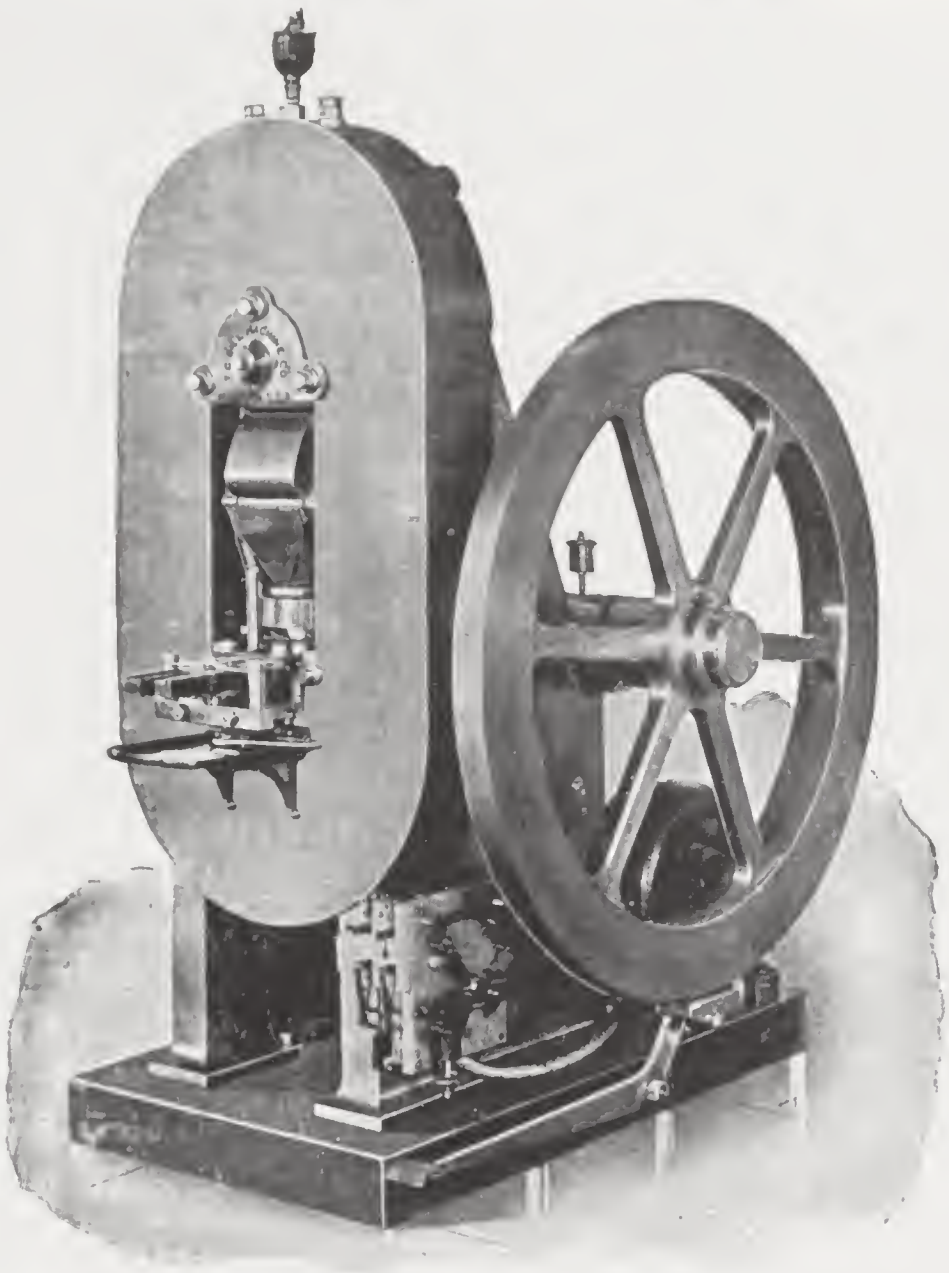
Gas, Electric and Combination Fixtures

DESIGNERS AND MANUFACTURERS OF LIGHTING : FIXTURES : IN : THE : MINT

133 and 135 West 23d St. and 124, 126 and 128 West 24th St.

NEW YORK

1903 advertisements by suppliers to the third Philadelphia Mint, which opened for business in 1901.

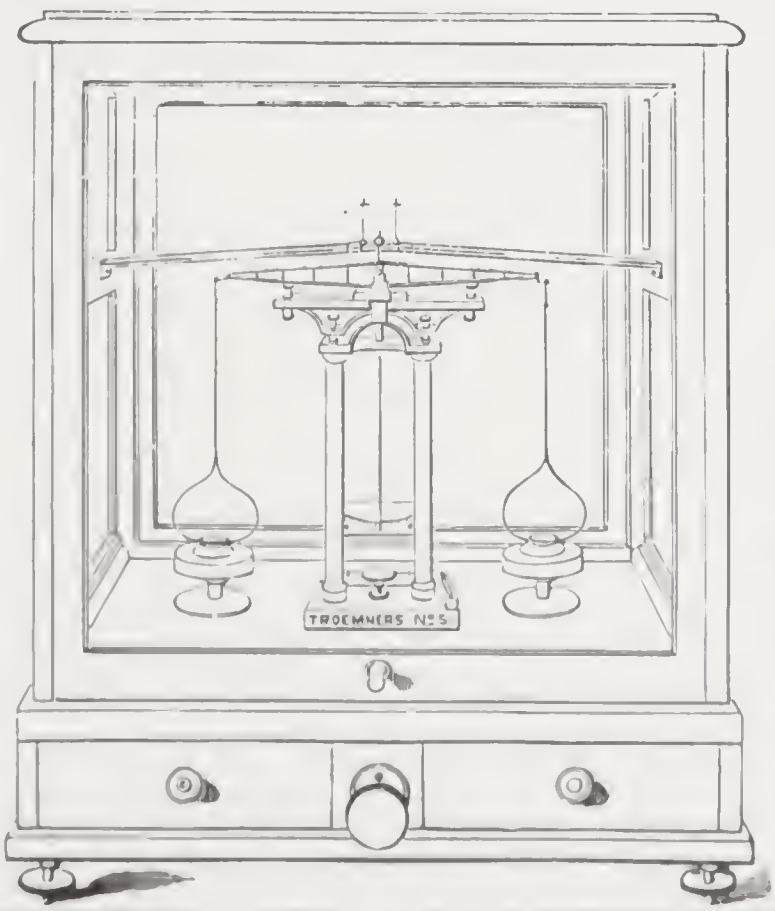


MOTIVE DRIVEN COINING PRESS

Coining
Machinery
AND
Machine
Tools

T. C. DILL
Machine Co.
INCORPORATED
Somerset and Mascher
Streets : *Philadelphia*

HENRY TROEMNER



911 Arch Street
Philadelphia, : Pa.

ESTABLISHED 1840

Manufacturer of ASSAY,
BULLION AND ANALYTICAL

Balances

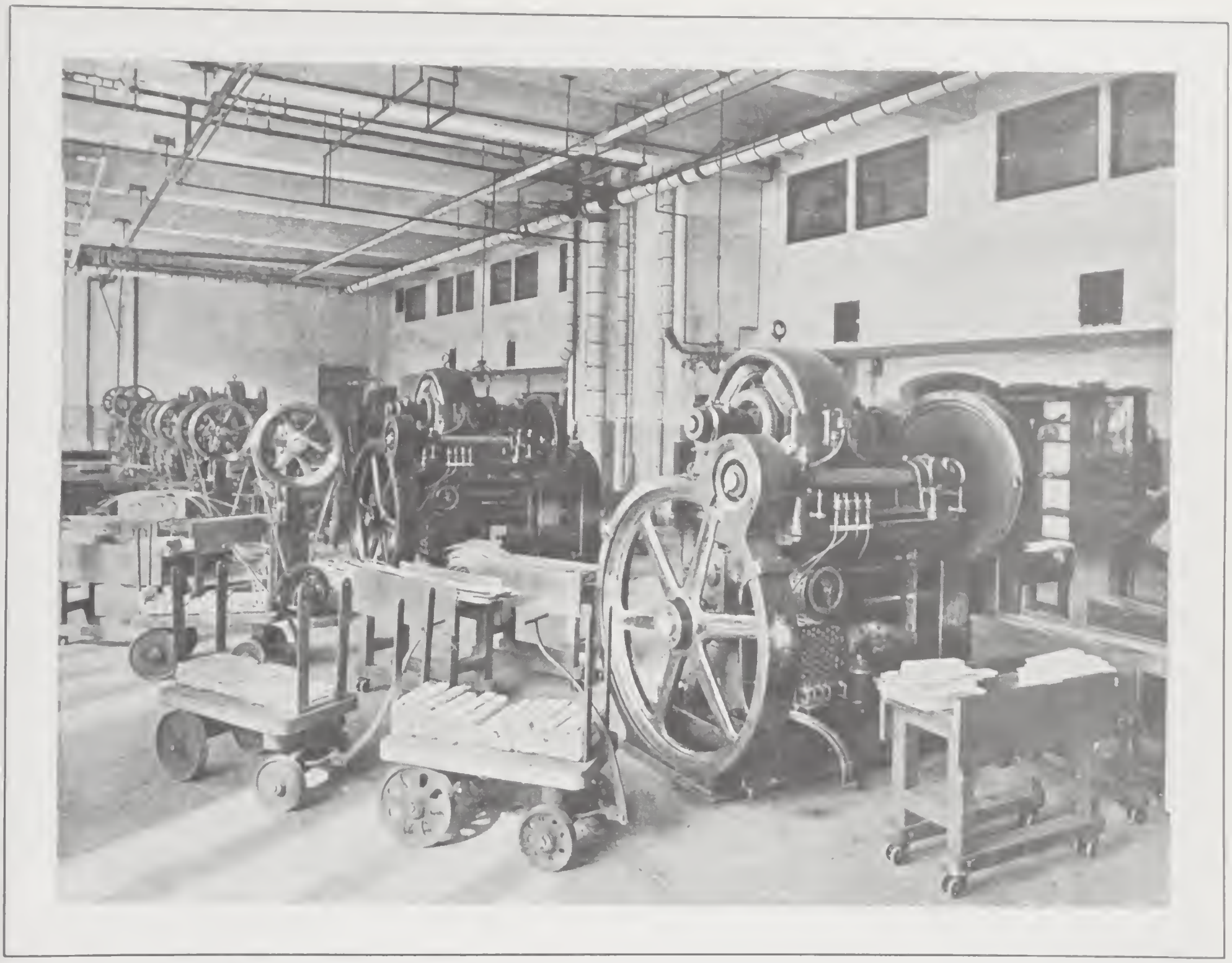
STANDARD OF EXCELLENCE

WEIGHTS OF PRECISION
Used exclusively by the U. S. Government

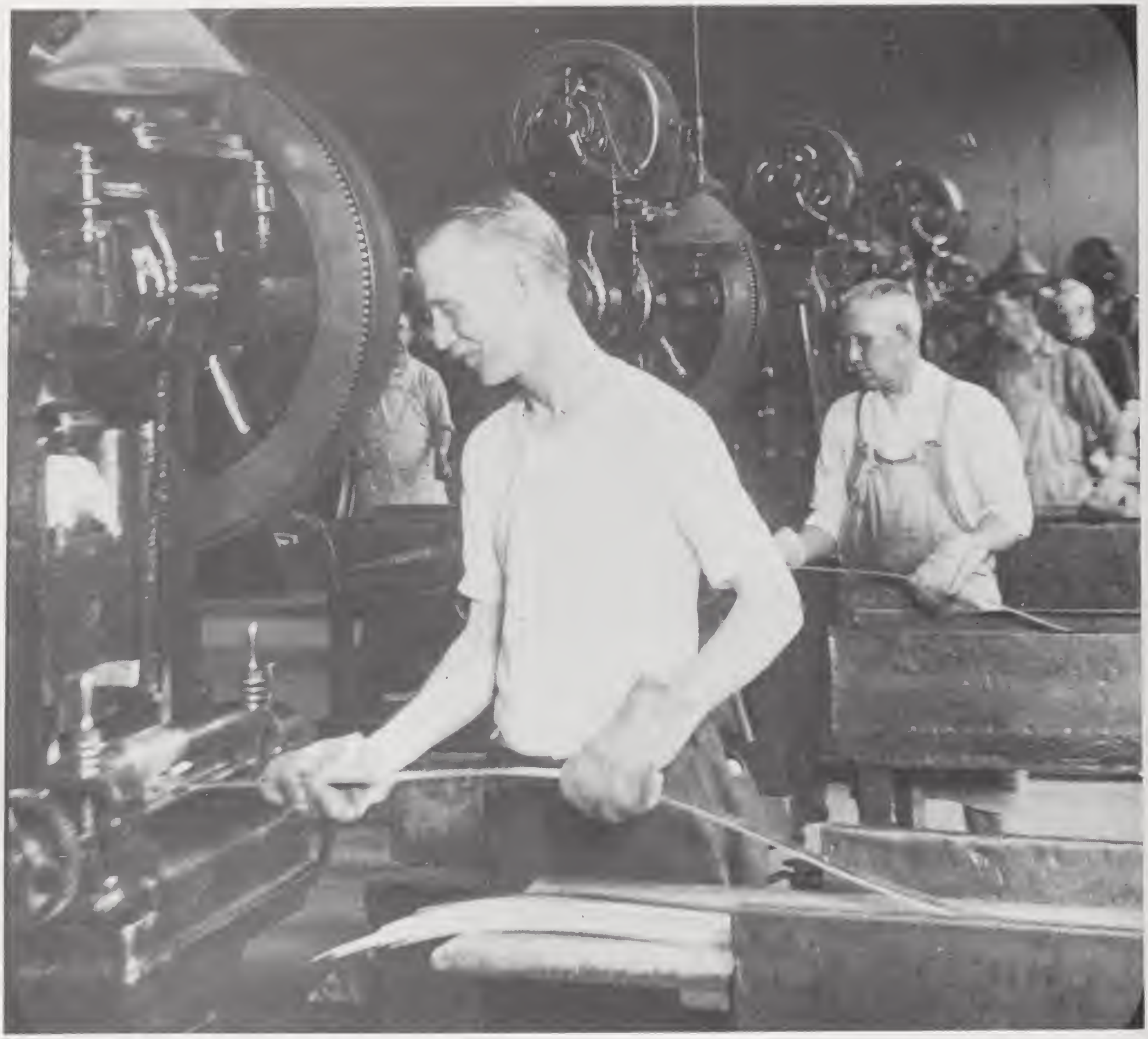
Price List on Application

1903 advertisements for coining machinery and balance scales. Dill and Troemner were two of many suppliers of equipment to the third Philadelphia Mint which opened in 1901.

The Parting Room, Philadelphia Mint, 1903. In this facility precious metals were refined.

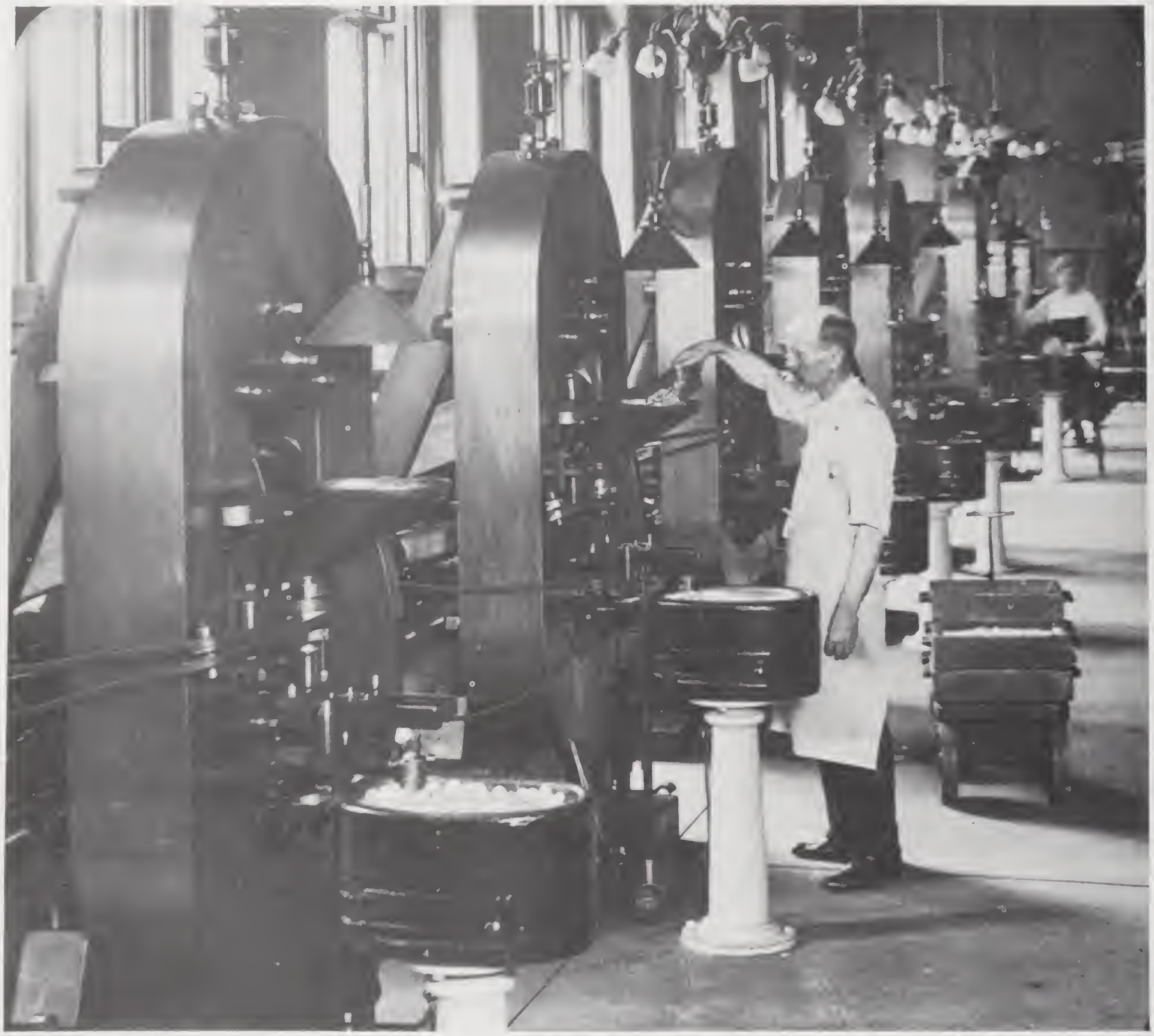


View of the Rolling Room in the third Philadelphia Mint, 1903. By this time the devices were electrically powered, a change from the earlier steam operation.



Feeding a strip into the planchet cutting press at the third Philadelphia Mint, 1904. Completed in June 1901, the new Philadelphia Mint utilized electric power to drive presses and other equipment, a modernization of the earlier facilities. By 1903 all equipment was in place and the new building was in full operation. The scene shown here is from a photograph taken in 1904 and distributed by Underwood & Underwood, makers of stereopticon cards, glass projection slides, and related images.

Electrically-operated machines in use at the third Philadelphia Mint, 1904. By means of these devices discs which are underweight or overweight are separated from those suitable for coinage.



A row of gleaming coinage presses at the new Philadelphia Mint, 1904. In the late 1960s operations were transferred to the fourth Philadelphia Mint, the structure currently in operation.

Checking finished coins at the Philadelphia Mint, 1904. By means of this inspection process clipped, off-center, and other misstruck pieces are set aside for melting. Today (1982) this process has been replaced by a mechanical system of perforated screens. Then, as now, occasional mint errors slipped by, to the delight of numismatists.

Gold Coins and Collectors
— 19th Century —

3

Gold coins have long captured the fancy and imagination of collectors. Their impressive size, high value, rarity, and link with American history combine to make them the *creme de la creme* of numismatics.

One of the earliest collections of gold coins to be formed on a systematic basis was that of the Philadelphia Mint. William E. DuBois, assayer at that institution from 1835 to 1881, had a strong interest in numismatics and recorded for posterity much of what is known today concerning the initial assembly of what is now the National Coin Collection on exhibit at the Smithsonian Institution.

In *Pledges of History*, published in 1846, DuBois wrote:

> The [Mint Collection] was commenced in June 1838. Long before that date, however, Mr. Adam Eckfeldt, formerly chief coiner, led as well by his own taste as by the expectation that a conservatory would someday be established, took pains to preserve master coins of the different annual issues . . .

It should be noted that the term "master coins" was used in early times to refer to specimen strikings prepared with extreme care, including those with mirror-like surfaces referred to as *Proof* in later years. In America the Proof nomenclature was introduced by James Ross Snowden in the 1850s.

On March 3, 1839, Congress appropriated the sum of $1,000 for the acquisition of coins and mineral ores for the Mint Collection. In later years a continuing annual appropriation of $300 was made for the same purpose.

Adam Eckfeldt resigned as Chief Coiner in 1839. Therefore, it was left to DuBois to continue the collection at the Philadelphia Mint. Of DuBois, George G. Evans in his *Illustrated History of the United States Mint*, has written:

> He brought to it all the enthusiasm which animates most numismatists, sobered, however, by good judgment. His expenditures were always judicious. Some of the best of his specimens were culled from the Mint deposits for the bullion value, merely, of the pieces . . . He thought that a coin should be prized for its historical teaching or artistic merit and discouraged the rage to possess a piece simply because of its rarity.

It may be inferred, therefore, that Adam Eckfeldt and certainly William E. DuBois rate among the first American coin collectors on a grand scale.

Adam Eckfeldt, born in Philadelphia, June 15, 1769, to a father engaged in the manufacture of tools and machinery, studied mechanics at an early age. During the formative period of the Philadelphia Mint Eckfeldt built the first screw-type coining presses for the institution. It was said that the mechanism which automatically ejected coins from the restraining collar, as well as a number of other contrivances, were invented by him. A Mint payroll chart dated October 10, 1795, shows Adam Eckfeldt employed as a die forger and turner at the salary of $500 per year. On January 1, 1796, he was appointed assistant coiner by Director Elias Boudinot. Following the death of Henry Voigt, Eckfeldt was appointed chief coiner, a position which he retained until his 1839 resignation.

Walter Breen has written that from the first delivery of gold eagles from the Philadelphia Mint made on September 22, 1795, Adam Eckfeldt preserved an example for the Mint's reference.

Profile of an Early Numismatist William E. DuBois

The following sketch is excerpted and edited from a eulogy read before the American Philosophical Society, Philadelphia, November 18, 1881, by Robert Patterson. As recounted in the accompanying text, to DuBois we owe credit for much of the information concerning the early years of the Mint Cabinet.

William Ewing DuBois was born at Doylestown, Pennsylvania, December 15, 1810. Through his father, Rev. Uriah DuBois, he was descended from Louis DuBois, a French Huguenot of honorable extraction, who emigrated to America in 1660, seeking freedom of religious worship, and in connection with others of his countrymen, formed the settlement of New Paltz, Ulster County, New York. Through his mother, Martha Patterson, daughter of Prof. Robert Patterson, of the University of Pennsylvania, he inherited the Scotch-Irish element which has exerted so marked an influence in the development of our country.

The bright and studious mind of Mr. DuBois gathered every advantage from his opportunities, and he was well furnished in the classics and mathematics and in English literature. While yet a boy he developed a freedom and capacity as a writer quite remarkable.

His oldest brother was an eminent member of the bar, and it seems fitting that DuBois should come under his guidance, adopt the law as his profession. He accordingly pursued the usual course, in the meantime aiding to support himself by literary work and conveyancing, and was admitted to practice in September 1832. But his health failing him on account of a bronchial infection, he accepted an appointment in the Mint at Philadelphia, and thus began the lifework by which his reputation was established.

DuBois entered the Mint in September 1833 and was first employed in the office of the director, Dr. Moore. In 1835, at the request of the assayer, Jacob R. Eckfeldt, he was transferred to a more congenial position in the assay department. Here he continued for the remainder of his life. In 1836 he was appointed assistant assayer. In September 1872 he succeeded Mr. Eckfeldt as assayer, and remained at the head of the department until his death, July 14, 1881, thus completing nearly 48 years of Mint service.

Mr. DuBois early took rank as an accomplished assayer, and long before his death he reached the head of his profession.

The close intimacy between DuBois and Eckfeldt developed into warm friendship. The tie was made closer by the marriage of DuBois in 1840 to Susanna Eckfeldt, the sister of his chief. I shall have to speak of published works and scientific communications appearing under the names of Eckfeldt and DuBois. Although it was understood that DuBois was the sole literary author, yet no separate claim of authorship was made by either. Whatever reputation was earned, each was contented that it might be shared by the other, and jealousy never for a moment weakened the union that bound them for life.

In the year 1834 a change took place in the ratio of gold to silver in the standard of United States coins, the effect of which was to bring large deposits of gold to the mint. The coinage previously had been chiefly of silver. The more equal supply of the precious metals gave active employment in the assay of each of them and was, of course, most valuable as an experience to DuBois, who about this time became connected with the assay department.

In 1837, on revision of the Mint laws and standards brought about by Dr. Robert M. Patterson, then director, a reform was effected in the method of reporting assays, the millesimal system taking the place of the time-honored but cumbrous method of carats and grains. About this time, also, the older plan of assaying silver was abandoned, the humid assay being substituted, and largely worked under the direction of DuBois.

About 1838 branch mints were organized in the states of Louisiana, Georgia, and North Carolina. The labors and responsibilities of the Philadelphia Assay Department were increased by this development, partly from the necessity of instructing assayers for the new branches, and partly in testing the correctness of the assays made there.

In 1848 the great discovery of gold in California was made known. This brought a tremendous pressure on every department of the Mint, and not the least on the assayers. The gold coinage was, in three years, raised from a little over $3,000,000 to more that $62,000,000. The assays were often counted by hundreds in a day. But whatever the pressure in the office, accuracy ruled, the correctness of the assays was never impeached.

In 1853 a change was effected in law for providing subordinate silver coins. This brought about, for some

years succeeding, an unprecedented coinage of that metal, and still further increased the labors of the assay department.

He instituted a Cabinet of coins which now adorns the Mint. This was commenced in 1838. A small annual appropriation was procured from Congress for this purpose, and the work of collection was committed entirely to DuBois. He acted as curator of the Cabinet until his death.

Another important labor undertaken by DuBois (in connection with Eckfeldt) was the preparation and publication, in 1842, of *A Manual of the Gold and Silver Coins of all Nations, Struck Within the Past Century.* This was a work of very great labor and, from its expense, of some risk also to the author. It is admirably arranged, the information clear, and it embraced every subject of interest at that date as to coins, bullion, counterfeits, etc. Subsequently, in 1850 and 1851, supplements were published covering later topics made prominent in consequence of the California gold discoveries.

The writings of DuBois were numerous and continued up to the year of his death. His papers on numismatics were frequent and always attractive, his last appearance being in April of this year (1881), in an article on the "Coinage of the Popes." To the American Philosophical Society, of which he was elected a member in 1844, he made various communications on behalf of Eckfeldt and himself, mostly on topics suggested by experiences in the Assay Department of the Mint. Among the most curious was one on the "Natural Dissemination of Gold," by which we were astonished to learn that this precious metal is found in appreciable quantity in the clays underlying our city.

In 1869 he wrote for the *Bankers' Magazine*, "Propositions for a Revised System of Weights and Restoration of Silver Currency." The development of his views on these subjects is a model of clear exposition, and the conclusions reached were such as might be expected from a mind aiming to obtain practical results rather than to impose visionary theories.

From the beginning he was highly esteemed at the Mint. It was his ambition to acquire knowledge of every branch of the service, and with his capacity and opportunities this end was attained. He early became the trusted friend and counselor of his colleagues and was able to serve them in many ways, perhaps most of all with his ready pen. As time passed, and 48 years of experience was given him, he was recognized by all as the Nestor of the Mint service. And here I pause to draw a lesson, from the example of DuBois' life, as to the value of a properly organized civil service. In the department with which he was connected, political tests were never obtruded, and permanence of tenure followed on merit. On no other basis could his services have been claimed or retained. They would have been transferred to a private sphere, probably to his pecuniary gain, certainly to the public loss. He was very accessible, and ever ready to lend aid from the stores of his knowledge, but in particular did he delight to instruct and bring forward his younger friends.

Dubois was able to fulfill his official duties until within a few months of his death. He was fully conscious of his approaching end, preserving his intelligence to the last, and the faith which had comforted him in this life supported him at its close.

The following minute was adopted at a meeting of the officers and employees after his decease:

> The remarkably close conformity of the United States coins to the standard assigned them by law has been recognized by the highest Mint authorities of the world to be unsurpassed, if quite equalled, in its uniform exactness. The founding of such a reputation and its continuance during the last half century are largely due to the joint labors of the late Jacob R. Eckfeldt and William E. DuBois.

After his resignation, Eckfeldt continued to visit the Mint on numerous occasions, often helping with mechanical matters and giving advice. For this no compensation was sought or received. On February 6, 1852, Eckfeldt, then age 83, died.

Under the aegis of William E. DuBois (refer to accompanying biography) the Mint Cabinet flourished. The curator maintained close friendships with many collectors, with the result that during the early days numismatists seeking examples of back-issue coins, particularly cents and half cents, could obtain them simply by exchanging current pieces. However, it was not long before the Mint realized that the Cabinet could be augmented by restriking early rarities, so a lively, if clandestine, trade ensued. Although allegations of mint restriking and related practices surfaced from time to time in auction catalogues and elsewhere in print, particularly during the 1870s, the extent of these activities was not generally known to numismatists during DuBois' lifetime. Indeed, it was nearly a century later that Don Taxay, Eric P. Newman, Walter Breen, Kenneth Bressett, and others wrote extensively concerning the origin of the 1804 silver dollar, restriking of the 1804 $10 and so on. Unquestionably DuBois must have been involved, but such involvement was never reflected in his extensive writing.

In the Matthew Adams Stickney Sale catalogue of 1907, Henry Chapman postulates that Stickney "was probably the first person in America to form a systematic collection of the various dates in the several series," having begun his collection around 1823.

Stickney was born in Rowley, Massachusetts, September 23, 1805. He died on August 11, 1894, having spent most of his life in Salem, Massachusetts.

He began his career in the accounting room of Sawyer & Pierce, a dealer in West Indian goods. Several years later he established himself in the same business, where he remained for 30 years until his retirement in 1854.

Although his coin collection occupied much of his time, like other numismatists with an intellectual inclination, he also collected old almanacs, autographs, and ancient art. Ornithology was another pastime for him.

In a letter to Edward Cogan dated July 2, 1867, Stickney wrote concerning his 1804 silver dollar and his collecting experience:

> [The 1804 dollar] was handed directly to me from the Cabinet of the United States Mint in Philadelphia, on the 9th of May, 1843, by one of its officers (W. E. DuBois) . . . I only desired it to help make up the chronological series, which I perhaps was the first to attempt to make of United States coins . . .
>
> Those having dollars of that date (Cohen and Mickley) were not then known at the Mint as collectors . . . I have been for nearly 50 years a systematic collector of coins, and for a very long period almost without a competitor, and many of the rare coins which now enrich other cabinets were, by great solicitation, obtained from me.

Stickney went on to become one of the great collectors of American coins, as Chapman's 1907 sale catalogue clearly confirms.

Stickney was able to nearly complete his collection of quarter eagles, half eagles, and eagles from 1794 to 1834. He also had many fine specimens of $1 and $3 gold pieces, including many issues with mintmarks. His most important regular issue gold coin, an 1815 half eagle, brought $2000, an enormous price at the time. It exceeded the price of every other coin in the sale with just two exceptions: the Brasher Doubloon at $6200 and the 1804 silver dollar at $3600.

Joseph J. Mickley was one of the earliest collectors of United States coins by date sequence. Story has it that in the year of issue he obtained four 1827 Proof quarters directly from the Mint, paying face value for them. This contradicts Stickney's statement, in his letter to Cogan, that Mickley was not then known at the Mint as a collector. However, according to William E. DuBois, writing in the *American Journal of Numismatics* in 1871:

> We will agree in calling him [Mickley] the father of American numismatics. Do you know what started him in the coin-collecting furor? Many years ago, when he cared no more for coins than the rest of mankind do, he heard that the cent of 1799 was very rare. That was the year he was born in. A cent of that year he must have; and he got it . . .

Born on March 24, 1799, in Pennsylvania, Mickley was regarded as one of the best menders of musical instruments in the United States. He was also an acknowledged music critic and was fluent in French, German, and Swedish. He began his pursuit of coins around 1816 and was able to assemble one of the finest collections ever put together. He was one who was proud to show his

THE

COIN CHART MANUAL,

ISSUED FROM THE OFFICE OF

Thompson's Bank Note & Commercial Reporter.

ARRANGED BY J. THOMPSON, BANKER AND BROKER, CORNER OF WALL-STREET AND BROADWAY, NEW YORK.

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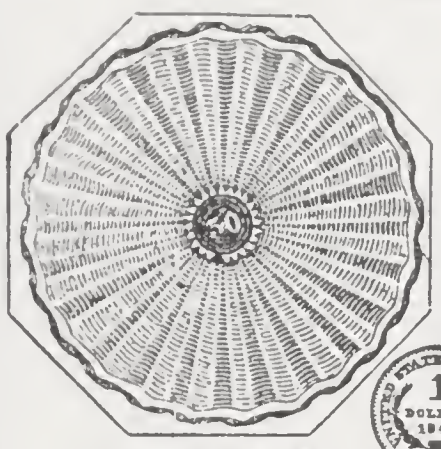
GOLD COINS OF THE UNITED STATES.



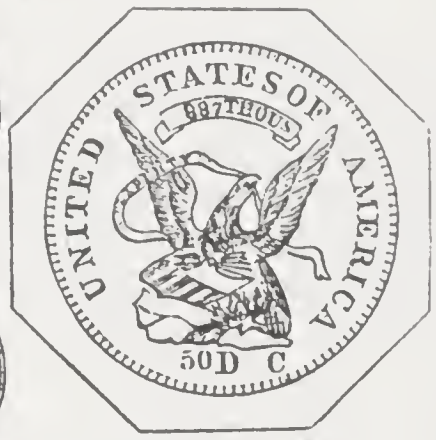
Quintuple Eagle, $50

Gold Dollar

Double Eagle, $20

$3

$3



Quintuple Eagle, $50

Eagle, $10

Old ½ Eagle, $5.25

Old Eagle, $10.50

½ Eagle, $5

Old ½ Eagle, $5.25

Old ½ Eagle, $5.25

Old ¼ Eagle, $2.62

½ Eagle, $5

¼ Eagle, $2.50

Old ½ Eagle, $5.25

CALIFORNIA AND BECHTLER PIECES.

$9.50

$4.75

$2.37

95 Cents

$4.75

$4.75

* The California Coins are bought at ¼ to 5 per cent below the above quotation.

A page from an 1856 guide to gold and silver coin prices furnished to bankers and others handling pieces in quantity. At the time there was little coin collecting interest in America, and values were mainly predicated on bullion value. Note that the "old" gold coins, those issued prior to August 1834, are worth more than face value but later ones are not. Privately issued gold coins were worth less than the values stamped on them

GOLD COINS OF SOUTH AND CENTRAL AMERICA.

Doubloon, $15.50

Doubloon, $15.50

Pistole, $3.75

Doubloon, $15.50

Doubloon, $15.50

Half doubloon, $7.75

Doubloon, $15.25

Doubloon, $15.50

½ Pistole, $1.75

Doubloon, $15.50

Pistole, $3.75

½ Doubloon, $7.75

Doubloon, $15.50

Doubloon, $15.50

Doubloon, $15.50

Pistole, $3.75

Doubloon, $15.50

Pistole, $3.75

Pistole, $3.75

½ Pistole, $1.87

½ Pistole, $1.87

Pistole, $3.50

½ Pistole, $1.87

Another page from a bullion guide issued by J. Thompson, New York, 1856. At the time foreign gold and silver coins were legal tender in the United States, and to determine their value bankers needed information such as this.

coins; however, he regrettably found that occasionally a piece or two was missing after his visitors left. In 1867 he was robbed of nearly half of his collection, so he decided to sell the remainder, mostly United States coins, shortly thereafter.

Subsequent to the sale of his coins, he turned to collecting coin books, something that happens with "retired" collectors, according to DuBois. That gold coin collecting had not yet caught on in this country is demonstrated by the Mickley collection, the emphasis of which was on colonial, copper, and silver issues.

It was not until the late 1850s that coin collecting in general and gold coin collecting in particular (although to a far smaller extent due to the expense involved and the high face values) started to become popular in America. Although there were a few dozen scattered collectors in the country prior to 1850, Mickley and Stickney among them, real interest did not materialize until this period.

Prior to 1858, those who bought and sold coins did so in conjunction with their other businesses. Often the coin sellers were also dealers in curios, antiques, art objects, and the like or were bankers or bullion brokers. The first full time professional coin dealer in America was Edward Cogan of Philadelphia, often referred to as the "father of the coin trade." Cogan was born in England in 1803 and came to America in 1853. He entered the coin trade on a part time basis in the latter part of 1856. Shorly thereafter he began collecting large cents. In 1857 public interest in coin collecting jumped sharply when the large cent was discontinued in favor of the small flying eagle cent. Deciding to sell his duplicates, Cogan held a sale by private bid on November 1, 1858, and sold 77 lots to 19 buyers for $128.68. From this modest beginning Cogan began to buy and sell coins as a full-time profession. He went on to become one of the most respected numismatists in the country.

When he began business Cogan estimated that there were no more than 100 coin collectors actively pursuing the hobby. This estimate was probably conservative, for the number must have been several times that figure if casual collectors of coins are included. In 1858 the Mint sold 80 silver Proof sets, indicating that the number of serious or advanced collectors may well have been in the 100 range that Cogan suggested.

In addition to the discontinuation of the large cent, another development that increased interest in coin collecting was the formation of the American Numismatic and Archaeological Society in 1858. Eight years later this organization began publishing the *American Journal of Numismatics*, which went on to become the definitive journal on the subject during the next several decades.

In 1859 Dr. Montroville W. Dickeson produced *The American Numismatical Manual*, one of the first books written exclusively on the subject of United States coins. In the preface he stated:

> It is the purpose of this work, as far as practicable, to establish the origin and faithfully describe the coins and coinage of our country, from the dawn of the period when the pioneers of discovery, settlement, and civilization experienced the necessity and adopted the measures for founding some commercial standard or representative of values in their commerce, and also trade with one another, down to the present very enlightened era in our history . . .

This marked the first time that United States gold coinage was discussed in depth in a numismatic book. Dickeson devoted 21 pages to the subject and stated, in part:

> The data relative to our gold coinage, owing to the want of proper Mint records and the great scarcity of the earlier emissions, is so limited as to render impracticable a particular detail of the types and varieties. We must, therefore, content ourselves with giving the different types and such varieties as have come under our observation.
>
> The early gold coinage of our government has become very scarce, and hence is exceedingly rare, being found more frequently in the southern than in the northern part of our Union.

Dickeson's comments with regard to some issues are rather quaint in retrospect. He stated that he had seen two 1801 half eagles, a coin which is unknown today! Also, he pointed out that the 1841 quarter eagle only appears with the letter C on the reverse for *California* — "This emission being a private enterprise for that country."

In defense of Dickeson's errors it should be stated that his work was pioneering, a target for others to shoot at, so to speak, and that ensuing decades would see many additions and modifications to knowledge generally accepted earlier.

James Ross Snowden, who was appointed director of the Mint in 1853, contributed to the increase in coin collecting. In 1858 he was respon

sible for issuing Proofs to collectors for the first time. Earlier there was occasional interest in Proof coin collecting, but distribution was erratic, and most collectors acquiring them did so by trading examples needed for the Mint Cabinet or by knowing someone close to the Mint. As early as 1845 Matthew A. Stickney was able to obtain Proof sets in this manner.

Mint regulations regarding the sale of Proof coins at a premium were posted by Snowden in 1858. The charge for six denominations of gold Proofs ($1, $2.50, $3, $5, $10, and $20), whose face value was $41.50, was $43. Walter Breen believes that only three full sets of 1858 Proof gold coins were sold, for most collectors preferred to order individual gold coins of certain denominations which interested them. Even accounting for sales of individual coins, it is doubtful if more than approximately 20 gold dollars, a dozen quarter eagles, 15 $3 pieces, a half dozen half eagles and eagles, and an even smaller number of double eagles were made. It is probable no more than a few dozen examples were distributed of even the lower denominations each year during the next decade or so. During the following decade, the 1860s, Proof mintages for certain denominations dipped as low as 25 pieces for the year, and this number may be generous in terms of those actually distributed, for it is possible that some coins may have been melted.

During the 1860s coin collecting grew at a rapid pace. Snowden published a book on Washington tokens and medals, a popular area of interest at the time, and also authored a book describing coins in the Mint Collection. At the time the Mint Collection was growing, and certain officials of that institution attended the exhibit with just as much pride as if it had been their own property. The Washington display in particular was featured. Realizing that the Mint holdings were inadequate in many areas, the curator often bid on needed coins appearing in public auction sales. However, trading formed the method by which most specimens were acquired.

Additional interest during the 1860s was generated by the proliferation of auction sales and by those who made numismatics their full-time business. The coin world was a stir of frenzied activity, complete with speculation, problems concerning grading and other situations.

Among the early dealers was William H. Strobridge, who was born in Vermont in 1822. In the early 1860s he went to New York City. Entering the coin business, he catalogued many fine collections for auction from 1861 through 1876, the most notable being the holdings of Lilliendahl, Seavey, Clay, and Stenz. In November 1876 he suffered detachment of the retina which caused him to go blind. He died many years later in 1898.

One of his most memorable sales was that of the William A. Lilliendahl Collection; however, it included just five regular-issue United States gold coins, among them a Proof 1860 gold dollar and quarter eagle which sold for $1.10 and $2.62 respectively.

In 1863 Strobridge offered the George F. Seavey Collection at auction. The realization of $3,407.79 was sizeable for the period. In that sale were offered many different early American gold coins dating from 1795 onward. Also included were complete gold Proof sets from 1858 and 1860. Following the dispersal of his first collection, Seavey, like many other numismatists, began collecting again. His second collection was sold intact in 1873 to Lorin G. Parmelee.

The year 1864 saw the collection of John F. McCoy sold by W. Elliot Woodward, a dealer from Roxbury, Massachusetts. Woodward, who bought and sold coins while attending to his profession as a druggist, was a man of many interests, including archaeology, antiquities, and the restoration of historical properties. Woodward became one of the most prominent dealers of his era and sold many collections, including those of Mickley, Haines, Jenks, Dohrmann, and Randall. He died in 1892.

John F. McCoy was a Philadelphia leather merchant whose collection brought a record $13,101.60. In the sale were offered nearly 100 lots of gold coins, including many extreme rarities. A complete date collection of eagles, many half and quarter eagles, Proof three-dollar gold pieces of 1854, 1855, and 1856, as well as partial gold Proof sets of 1858, 1859, and 1860, were among the highlights.

Joseph J. Mickley's collection was sold in 1867 at the auction house of Leavitt, Strebeigh & Co., of New York, for $13,285.70. The catalogue was prepared by W. Elliot Woodward. At the time it was customary for coin dealers to prepare

ANNUAL REPORT

OF THE

DIRECTOR OF THE MINT,

FOR THE FISCAL YEAR ENDING

June 30, 1860.

PHILADELPHIA:
COLLINS, PRINTER, 705 JAYNE STREET.
1860.

For INDEX, see p. 45.

Cover of the "Annual Report of the Director of the Mint, 1860." The figures given therein represent fiscal, not calendar, year activities.

A.—STATEMENT OF DEPOSITS AND COINAGE,

At the Mint and its Branches, during the year ending June 30, 1860.

DEPOSITS.

DESCRIPTION.	MINT OF U. STATES, PHILADELPHIA.	BRANCH MINT, NEW ORLEANS.	BRANCH MINT, SAN FRANCISCO.	BRANCH MINT, DAHLONEGA.	BRANCH MINT, CHARLOTTE.	ASSAY OFFICE, NEW YORK.	TOTAL.
GOLD.							
Foreign coin	$7,352 50	$24,855 83	.....	.....	.....	$114,405 00	$146,613 33
" bullion	53,599 31	39,308 96	.....	.....	.....	301,404 00	394,312 27
U. S. coin (O. S.) . . .	4,207 50	.....	.....	.....	.....	4,338 00	8,545 50
" bullion	4,200,859 62	89,566 92	$11,319,913 83	$67,085 21	$134,491 17	6,311,804 36	22,123,721 11
TOTAL GOLD . .	$4,266,018 93	$153,731 71	$11,319,913 83	$67,085 21	$134,491 17	$6,731,951 36	$22,673,192 21
SILVER.							
Deposited (including purchases)	$732,897 17	$1,380,412 08	$336,030 86	.....	.....	$409,299 99	$2,858,640 10
U. S. bullion	23,608 24	701 32	144,108 89	.....	.....	125,378 60	293,797 05
TOTAL SILVER . .	$756,505 41	$1,381,113 40	$480,139 75	.....	.....	$534,678 59	$3,152,437 15
TOTAL GOLD AND SILVER	$5,022,524 34	$1,534,845 11	$11,800,053 58	$67,085 21	$134,491 17	$7,266,629 95	$25,825,629 36
Less re-deposits at the different institutions:— Gold (U. S. bullion), $3,152,679 36; Silver, 398,373 30	.....	.....	.....	.....	.....	.....	3,551,052 66
TOTAL DEPOSITS . .	.....	.....	.....	.....	.....	.....	$22,274,576 70

Coinage effected at the various branch mints for the fiscal year ending June 30, 1860. The figures given are different from those in numismatic publications, for the numbers on this chart represent two different dates, 1859 coins from the last part of that year and 1860-dated coins for the first six months of the latter year. To determine coinage by dates numismatic researchers have used the monthly and other periodic figures (not shown here) for analysis.

During the late nineteenth century, when the hobby of numismatics was at its formative stage in America, Mint reports were the only source of information concerning coinage production. At the time no one analyzed the monthly or quarterly reports which made up the annual figures, so the true mintages corresponding to coin dates was often unknown.

catalogues but for sales to be held on the premises of a commercial auction house. At the Mickley Sale $750 was paid for an 1804 silver dollar, the highest price to that date for a United States coin. Gold issues at the time did not yet bring large premiums, a fact which no doubt contributed to the rarity of many issues of the late nineteenth century. Had Proof and other gold coins been recognized in the marketplace for the rarities they were, undoubtedly much larger quantities of new Proofs would have been ordered each year. This is not the case, and the result was that when 1804 silver dollars were capturing many paragraphs of numismatic commentary in print, the United States Mint was selling at nominal prices Proof gold coins which ultimately would become extreme rarities for their fortunate purchasers.

Several developments in the 1870s set the stage for an increased interest in gold coin collecting.

John W. Haseltine, who was born in 1838, described nearly 100 collections for auction sale during nearly three decades as a professional numismatist. The collections of Randall, Newlin, Maris, Crosby, and a host of others were put on the auction block through him. Today Haseltine is best remembered for his discovery of several valuable coins, including a unique pair of Nova Constellatio pattern silver pieces and a unique New Jersey/Washington cent, as well as the restriking of the 1861 Confederate cent and the publication of information concerning silver coin die varieties. In the 1870s he could not have known that two young numismatists in his employ, two brothers, would in later years leave an indelible mark on the numismatic world. Samuel Hudson Chapman and Henry Chapman joined Haseltine in 1875, stayed three years, and in 1878 left to form an aggressive dealership. Some of the most important collections ever formed would be sold by the Chapman brothers over the next half century.

The 1870s saw the production of two more serial publications which served to stimulate interest in coin collecting and at the same time to provide additional information. The *Coin Collectors Journal*, published by Scott & Co. from 1875 to 1888, and Edouard Frossard's *Numisma*, published from 1877 to 1885, were enthusiastically received. At this time, however, the mainstream of interest was still directed toward colonial and copper issues, with American silver coins forming a secondary field of activity. Gold coins, due to their high face value, could not be collected casually and were the domain of the wealthier collector. Silver and gold coins with mintmarks were largely unrecognized.

In 1870 $5, the face value of a half eagle, would buy over 600 building bricks, more than a ton of anthracite coal or a week's wages in a knitting mill. In the same year a freshly-minted half eagle would secure the services of a carpenter for two days, a mason for nearly the same time, or would hire a team and driver for a day. A blacksmith, engineer, machinist, painter, or carpenter, all of whom earned on the order of $2.50 to $2.75 per day, could not in two weeks earn even the *face value* of a gold Proof set, never mind the premium. Thus, such pieces were reserved for the wealthy.

One of the finest properties sold during this period was the Seavey Collection offered in 1873. A catalogue was produced by Strobridge for the event; however, Lorin G. Parmelee purchased the collection intact, and no coins crossed the auction block. Seavey requested that 150 copies of the catalogue be produced, with the result that today, copies of the catalogue for this sale, which was never held, are collectors' items.

The Seavey Collection became an important addition to the holdings of Parmelee, a Boston bean baker, who had a particularly enthusiastic and aggressive spirit. With regard to gold coins, the Seavey Collection contained virtually a complete set (not including mintmark varieties, which at the time were generally ignored) from 1795 to 1873, with complete gold Proof sets from 1858 onward. It included half eagles of 1815, 1819, 1822, and both types of 1829.

Another great collection offered at auction was that of Col. Mendes I. Cohen, sold in 1875.

Born in 1796, Cohen made his home in Baltimore until 1879 when he died. His collection of gold was virtually complete from 1795 to 1875, again, without regard to mintmark varieties.

A fabulous rarity was included in the Cohen Collection; however, it was unappreciated at the time. The holding included an example of the 1825 over 4 overdate half eagle in Proof condition, a coin which later became part of the Louis Eliasberg Collection. Today only two specimens of this rarity are known to exist.

CATALOGUE

OF A

VERY CELEBRATED AND VALUABLE COLLECTION

OF

Gold, Silver and Copper

COINS AND MEDALS,

The Property of COLONEL M. I. COHEN, of Baltimore,

TO BE SOLD AT AUCTION

BY

MESSRS. BANGS, MERWIN & CO.,

656 BROADWAY, NEW YORK,

MONDAY, TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY,
The 25th, 26th, 27th, 28th and 29th OCTOBER, 1875.

Commencing at 3 o'clock, P. M.

Catalogued by EDWARD COGAN.

Orders executed by the Auctioneers; JOHN W. HASELTINE, 1225 Chestnut Street, and J. W. KLINE, 12 South Eighth Street, Philadelphia; H. G. SAMPSON, corner of Fulton Street and Broadway, New York; or by EDWARD COGAN, 408 State Street, Brooklyn, N. Y.

New York:
CHARLES C. SHELLEY, STEAM BOOK AND JOB PRINTER,
68 BARCLAY STREET.
1875.

DOLLARS.

235 1850 Uncirculated
236 1851 Uncirculated
237 1852 Uncirculated
238 1853 Uncirculated
239 1854 Small date. Uncirculated
240 1854 Large date. Fine proof
241 1855 Fine proof
242 1856 Fine proof
243 1857 Fine proof
244 1858 Uncirculated
245 1858 Uncirculated
246 1859 Fine proof
247 1860 Beautiful proof set
248 1861 Beautiful proof set
249 1862 Beautiful proof set
250 1863 Beautiful proof set
251 1864 Beautiful proof set
252 1865 Beautiful proof set
253 1866 Beautiful proof set
254 1867 Beautiful proof set
255 1868 Beautiful proof set
256 1869 Beautiful proof set
257 1870 Beautiful proof set
258 1871 Beautiful proof set
259 1872 Beautiful proof set
260 1873 Beautiful proof set
261 1874 Beautiful proof set
262 1875 Beautiful proof set

FRENCH COINS.

263 *Gold* Ecu d'Or of Louis VI. The King, seated in his chair of State. In fine condition and very rare
264 *Gold* Royal d'Or. Charles (uncertain which). The King standing. But little circulated and scarce
265 *Gold* Cheval d'Or of France. Very fine and scarce

A page from Edward Cogan's 1875 auction of the Col. Mendes I. Cohen Collection sale. At the time few cataloguers devoted lengthy descriptions to rare United States coins, and this offering was no exception. The gold Proof sets, complete from 1860 to 1875, were unappreciated in their day but are highly prized rarities at the present time.

In 1875 certain Proof gold coins in the Cohen Collection netted the owner less than they originally cost at the Mint. Such a performance doubtlessly dampened interest in ordering Proofs from the Mint. In retrospect it is a coincidence that gold coin Proofs of the year 1875 are today considered to be among the "rarest of the rare." Only 20 sets were struck, and it is probable that not all of the individual coins were distributed. Low business strike mintages of certain Philadelphia issues of the year have placed an additional demand on the few remaining Proofs. The 1875 $3 in particular has achieved an almost legendary status.

During the decade of the 1870s fewer Proof gold coins were produced than for the ten years previous. Walter Breen estimates that during the 1870s, a span of ten years, about 200 sets were sold of Proof gold, approximately two thirds of the number of the 1860s.

An 1885 article in the *New York Herald* noted that the collection of Lorin G. Parmelee, of Boston, "which two years ago was valued at over $60,000 and is constantly being enriched by additions," was the finest in existence at the time. Coming a close second was the cabinet of T. Harrison Garrett, of Baltimore, son of John W. Garrett, founder and first president of the Baltimore and Ohio Railroad. Breen noted that Garrett, although comparatively young, "did fair to rival Mr. Parmelee in the number and condition of his rarities."

T. Harrison Garrett, who died in a boating accident on Chesapeake Bay in 1888, had acquired by the time of his death a cabinet particularly rich in high quality United States copper, silver, and gold coins. His collection was transferred to his son Robert, who exhibited it at Princeton and who, in 1919, traded it to his brother John Work Garrett. The latter then acquired many additional specimens, with the result that by the time of his death in 1942, he had assembled one of the greatest cabinets of American numismatic specimens ever gathered.

The Garrett Collection, which is chronicled in detail in *The History of United States Coins as Illustrated by the Garrett Collection*, contained many important gold rarities, including certain Proofs dated prior to 1858 and nearly all Proofs from that date through 1915, the rare early quarter eagles, a date set of $3 pieces (including the 1875 Proof, from the complete gold set of that year), rare early half eagles (including the 1798 small eagle style, 1815, 1819, 1826, 1827, 1828, two varieties of 1829, and others of the era), rare eagles, and elusive double eagles. As is the case with other collections primarily formed during the nineteenth century, the Garrett holding did not emphasize mintmark issues.

Many important pieces were acquired by T. Harrison Garrett from Harold P. Newlin. Newlin, who observed that Garrett was a major purchaser in Haseltine's sale of his collection of dimes and half dimes, wrote to offer some specials privately which were held back, noting that:

> I retained a very few of my choice pieces because I could not make up my mind to part with them. I find now however that having these few is a temptation for me to collect again, and it is too expensive a luxury. I shall have to forego the pleasure and content myself with collecting a few unimportant and inexpensive things. Should you desire to see a few coins I have, I shall be glad to send them to you. Is your line of gold complete? If not, what do you lack? I have quite a few rare pieces . . .

Newlin found in Garrett a new friend, with the result that Garrett made frequent purchases. Newlin favored Garrett with special prices, often selling pieces to his friend for less than they would have brought at auction.

The Garrett correspondence now preserved in the archives of The Johns Hopkins University, Baltimore, contains many gold coin offers. For example, on September 13, 1883, Newlin informed Garrett that he had recently:

> secured two pieces which were obtained at the Mint in the year they were struck, by the gentleman [probably Rev. Foster Ely, of Elyria, Ohio] from whom I got them. They are the gold dollar and quarter eagle of 1863. They are in beautiful brilliant Proof condition. The former is rare, and the latter in my estimation is the rarest of the series of quarter eagles.
>
> In my former gold collection (originally the Adams Collection) I had an 1863 $5 gold piece but never could obtain the quarter eagle. There were I believe but thirty struck in this year, and certainly not a half dozen of these are now known to collectors. I do not know if you have the piece, but if you care for it I am willing to dispose of it as long as I have broken up my set. The price is $30, and $5 for the 1863 dollar. Will you kindly let me know what you lack in gold as I have one or two fine pieces left.
>
> Have you the 1829 half eagle of the new type? I have the 1838 and 1847 eagles.

Mint of the United States at Philadelphia

Feby 10th, 1880

Sir

For the two drafts amounting to $51.00 in your letter of the 29th of Jany, we send by Adams Express —

1 Gold Proof Set of 1880	43.00
2 Silver " " " @ 4.00	8.00
	$51.00

The Gold Proof Sets were delivered to us just one hour ago.

We have no Patterns of any dates for Sale and this is the only Mint that strikes proof sets

Yours respectfully
A. Loudon Snowden
Superintendent
per Boggs

Mr T. H. Garrett
No 7 South St
Baltimore
Md

February 10, 1880, invoice to T. Harrison Garrett from the Philadelphia Mint for one gold Proof set of 1880 and two silver Proof sets of the same year. Apparently February 10th represented the first day that gold Proof sets were available, for the letter notes: "The Gold Proof Sets were delivered to us just one hour ago."

The foregoing demonstrates vividly that in 1883, just 20 years after the coinage, the 1863 quarter eagle was a great rarity. Newlin, who was a careful correspondent and scholar (he wrote the first technical work on half dimes, for example), was quite aware of the rarity of various issues but knew of not as many as a half dozen 1863 Proof quarter eagles still in existence. It seems probable that the mintage figure of 30 does not represent the number actually distributed, and that far fewer reached the hands of numismatists.

Garrett apparently wrote to state he was going on a trip, for Newlin corresponded to inform Garrett that the 1863 quarter eagle and other pieces would be held until Garrett returned.

On October 22, 1883, Newlin wrote to Garrett:

> I received your favor of October 20th this morning and in reply would say that I have sent you my 1829 half eagle for inspection. I do not offer this for sale at present, for I am rather undecided whether I shall part with the few half eagles I have in addition. I will say however that in the event of my selling them, I shall give you the first opportunity of inspecting them at the view to purchase.
>
> The eagle of 1838 I obtained from Mr. William S. Jenks, an old collector of this city. I saw him today and asked him about its rarity. He said that he considers it rarer even than the 1804 eagle and that he waited three years before he got this one. I bought it from him in a set of eagles, therefore I cannot tell what it cost me . . .

In a subsequent letter Newlin wrote:

> In reply to your note received this morning I would say that the eagles are for sale at the prices stated in my note, but I have not yet decided to sell the half eagles. When I do I shall advise you. In the event of my selling them would you want both or only one and which one? [This is a reference to a pair of 1829 half eagles, the old style and new style.]

On October 21, 1884, the rare half eagle of the new type was offered.

> I wrote you some weeks ago but find that I have misdirected my letter. I promised you that should I ever conclude to sell my 1829 half eagle, new type, I'd give you first chance. I now think of selling my gold at private sale and offer you the 1829 Uncirculated for $100 net. It is very desirable showing the change of type and width. With the exception of one in the United States Mint this is the only one I have ever seen or heard of. It's therefore rarer than the 1815 or 1822 of which three each are known. [The 1822 half eagle in the Parmelee Collection was known to Newlin and included as among the three known, but later proved to be a counterfeit.]

On October 24th of the same year Newlin sent the 1829 together with a letter which described some other gold coins in his possession:

> You asked me what other gold I have. I have a complete set of gold eagles in very fine condition up through and inclusive of 1838. [Note: The description very fine refers to the quality in a general way, not a specific description of coin grades as we know them today.] Of half eagles I have 1795 large and small eagles, 1796, 1797 large and small eagles, and nearly all dates to 1834 new [a reference to the new reverse design adopted that year] including, I believe, the finest 1815 and 1824 half eagles known, both strictly Uncirculated.
>
> Still in the mint issue quarter eagles — nearly complete to 1834 new including 1796 without stars, strictly Uncirculated, 1796 with stars, strictly Uncirculated, 1797 Proof, and 1826 Proof . . . Gold Proof sets 1864 and 1865 and a complete set of gold dollars nearly all proofs . . .
>
> P.S. Dr. Robert Davis, of Philadelphia, was in Boston and called to see W. E. Woodward, who has both 1815 half eagles, yours and mine. Dr. Davis said that one was infinitely better than the other. I'm inclined to think that mine was the best one. If you are collecting coins in the most perfect condition I would be willing to trade with you providing mine is the finest and providing we agree upon their respective values, which I believe we can do. I bought my piece from Woodward privately and was assured that it is the finest of three known. If you want to see mine, send yours. I will then compare them and send both back to you so that you may compare them.

A few days later, on October 29th, Newlin again wrote concerning gold coins:

> Your favor received and this day I send you some gold for inspection. I have included a few coins you did not ask to see, only because I thought you might like to compare them with your specimens and perhaps would desire to trade. I have made it a point in my collecting always to buy the very finest pieces for they are the most satisfactory and becoming more difficult to obtain every year.
>
> I send you eagles, 1798 four stars facing, Uncirculated, file marks on the planchet before striking. 1798 six stars facing, Extremely Fine. This is the finest pair of eagles of this date I have ever seen. For the pair $70, your choice $37.50.
>
> Half eagles 1796 and 1797 [no price stated], 1802 half eagle $8. 1804, pair for $18, your choice $10. 1809 half eagle $10. 1818 (not fine enough for you so I did not send it). 1822, I have none. 1815 half eagle, finest known. Mr. Woodward refused an offer of $400 cash for this piece before I bought it. The offer was made by a Philadelphia collector named Bruce.
>
> 1796 without stars, quarter eagle, nearly Uncirculated, one I have never seen or heard of. In this condition I consider it one of the rarest of the gold coins,

$60 — I will trade for your 1796 with the difference to be determined when I see your piece.

This also applies to the 1815 half eagle and 1844 half eagle. I believe it to be the finest known. 1797 quarter eagle. Proof. Formerly Mickley's. 1808 quarter eagle. Not fine enough to send. (Weakly struck.)

1854 gold dollar. Brilliant Proof, $10. 1861 gold dollar. Brilliant Proof, $4.50.

From 1849 to 1859 I have no Proofs, but my pieces are in the most beautiful condition. I got one from old Mr. McAllister of Philadelphia who got them at the Mint each year. I value them almost as highly as Proofs, but I will not send them unless I hear from you.

In regard to the prices which I set upon my pieces I have this to say, that I never ask more than I think the piece is really worth in point of rarity or condition, and I have paid in many instances large prices for the coins. For instance, for the 1797 half eagle and the 1828 half eagle only Fine I paid $100, and for my 1797 quarter eagle $65. You therefore see I have been willing to give good prices for fine pieces, and I have never yet regretted it. I hope some of the coins please you.

After additional correspondence concerning the purchase of gold coins, Newlin wrote to Garrett on November 26, 1884, with regard to an 1834 quarter eagle of the old style (with motto):

. . . One of the rarest quarter eagles in brilliant proof condition. In regard to its rarity, you will find in *Snowden's Mint Manual of Coins*, page 115, that he says the act reducing the standard [weight] was passed June 28, 1834, and there were coined 4,000 quarter eagles of the old type. "These were in the hands of the chief coiner at the time the act was passed and were returned by him to the treasurer two days after, on the 30th. This fact makes extremely doubtful whether there was any issue of quarter eagles of the old standard, as it is probable that the last return would be immediately recoined at the reduced standard, as they would yield a considerable profit."

I believe but few of these coins got into circulation. I bought the piece that McCoy had (Mickley never had one), which was described as Fine but is only Very Good. There was also one sold in the Jenks Collection sold in Haseltine's 69th sale in January. It was only Good and brought $22. I think the piece rarer than the 1797 quarter eagle or 1796, and I believe that a really Fine specimen has never been offered.

I value the piece at $50 and think it worth that amount in rarity and point of condition. Should you desire the piece for your cabinet it is at your service and should you think the price I ask is too high, you can send me a check for any amount you may deem the piece to be worth. I doubt if you ever again have the opportunity of getting a piece in such condition.

In 1884 there was no standard catalogue or listing of mintage figures, varieties issued, and other information. A collector of the day had to obtain a scrap of knowledge here, another piece of information there, and so on. It was not until well toward the end of the nineteenth century that reliable lists were available to collectors. How rare is a Proof 1863 quarter eagle? Or an 1815 half eagle? No one knew for sure, and the best source of information was to correspond with a knowledgeable collector, as indeed T. Harrison Garrett did.

Garrett and his contemporary collectors knew of no defined grading system. As exchanges of correspondence printed in the *American Journal of Numismatics* and elsewhere show, what one person might call Uncirculated another would call Very Fine. The term *Proof* in particular was used with reckless abandon and was often assigned to any coin with even the slightest suggestion of mirrorlike surface, whether or not the coin had been intended for circulation or, in some instances, actually received wear.

On December 22, 1884, Newlin wrote to Garrett to discuss several gold rarities:

I received your registered letter here this morning with the 1796 and 1798 quarter eagles. I enclose the 1796 small eagle reverse. The only Uncirculated one that I've had. I got this from Mr. Parmelee, who paid me a little call several weeks ago . . .

In regards to the 1822 half eagle, I think its price depends upon its condition. Mr. Parmelee has one in his collection, and he told me that Mr. Appleton of Boston had two at one time, Mr. Appleton has sold his gold and I do not know where they now are.

It is only very recently that the 1822 was known to be rare. Nobody thought of looking for it. Now that it is more generally known and sought for, more specimens may turn up. H. P. Smith of New York City lately found one at a broker's office in the window and got it for $6, at least so he wrote me, and I believe it. The Mint has one and with Parmelee's, Smith's, and two of Appleton's, there would seem to be five known. Parmelee thinks it's the scarcest *after* 1815, but it will never bring as much as that date as the 1815 has always been considered the rarest coin in the United States series and has been advertised for and looked after for twenty-five years, without another specimen being brought to light. [Through this time, as Newlin stated, the 1822 had not been seriously studied. Parmelee's subsequently proved to be counterfeit, and the same finding may have attended several other specimens, the net result emerged that three genuine specimens were known, one held by the Mint and two in private hands; today the Mint has two and one is in private hands.]

I do not think the 1829 [old type] is any rarer than the 1829 small date [new type]. I should consider the

market value of an Uncirculated one to be $150 and a Very Fine $100. Mr. Parmelee thinks it's worth $100 . . .

During the 1880s interest in collecting gold coins increased sharply as Garrett and other numismatists sought to form sets. The 1815 half eagle in particular was applauded as a landmark rarity, and the 1822 was just beginning to be recognized for its real value. During the decade of the 1880s the Proof mintages of gold coins increased dramatically. Of the gold dollar denomination, 27 times as many Proofs were made than during the previous decade, and among $3 Proofs there were 8 times as many in the 1880s.

In addition to demand from coin collectors, speculators were interested in acquiring gold $1 and $3 pieces. It was suggested in print that investors desiring coins of this denomination would do well to order Proofs, placing the orders through local banks.

In 1888 the *American Numismatist* made its debut. The name was changed to *The Numismatist* for its second issue. In 1891 the American Numismatic Association was formed, adopting *The Numismatist* as its official publication (although it did not own the magazine; ownership did not come until the twentieth century, after a prolonged dispute). Decades later, in 1982, the membership roster of the American Numismatic Association stood at 40,000, making it the largest non-profit coin collecting organization in the world.

Before the close of the decade one of the most prominent collectors numismatics was ever to see would make his debut. Virgil M. Brand, born in Blue Hill, Illinois, in 1861, began collecting coins in 1889 with an initial interest in territorial gold pieces. He soon expanded his horizons to include coins of the world. In his pursuit he eventually amassed a huge collection of United States gold coins, including an 1822 half eagle. At one time he owned a dozen $4 stellas in gold.

In the "Objects of Coin Collecting," a paper read at the Chicago Numismatic Society meeting in 1905, he stated:

> Perhaps the chief value of collecting is that it arouses so keen an interest in the objects collected, that research and study concerning them, which otherwise would have been uninteresting and irksome and might have received little or no attention, becomes an attractive recreation, and in consequence is made much more thorough and comprehensive. A prompt reward for the expended effort is a greatly increased appreciation of the collected objects.

A beer brewer by profession, Brand, by the time of his death in 1926, had acquired over 300,000 coins. "He devoted the greater part of his life to the acquisition and study of his collection," according to David Enders Tripp, who has researched Brand's life history. (See accompanying biographical data.) In 1926 his collection was worth over $2 million — an enormous sum at the time. His 1822 half eagle eventually was acquired by Louis Eliasberg.

In 1890 the collection of Lorin G. Parmelee was sold, or rather *offered*, at auction by H. P. Smith and David Proskey, of the New York Coin and Stamp Company. At a time when the Chapman brothers had set new standards for American auction cataloguing by preparing lavish volumes with detailed explanations regarding rarity, past ownership, and other details, the Parmelee Sale attracted little attention. The catalogue was small and unassuming, great rarities were offered with little in the way of accompanying text, and publicity was minimal. Still, from the standpoint of its contents, this was the most important coin sale to be held up to that time.

Parmelee, born in Wilmington, Vermont in 1827, moved to Boston in 1849. A bean baker by trade, he knew most local restaurant owners and was in close touch with the public. In exchange for his merchandise he often received large cents in payment. Keeping duplicates not needed for his beginning collection, he formed a small stock which was made available to collectors and dealers willing to pay small premiums. In 1865 he purchased $200 worth of coins from Henry Ahlborn, a well known Boston dealer. He continued to specialize in large cents until 1873 when he acquired en bloc the Seavey Collection. This group, which contained a wide representation of United States coins in depth, prompted him to seek to acquire one of each denomination and date variety. Later, he acquired the collections of J. Carson Brevoort and Charles Ira Bushnell. In keeping with general emphasis in the numismatic marketplace at the time, Parmelee's holdings were particularly rich in early American colonial and copper issues. However, gold and silver denominations were represented by marvelous specimens as well. In the gold series his cabinet was virtually complete from 1795 to 1876.

Portrait of Lorin G. Parmelee. When his collection was auctioned in 1890 it was considered to be the finest cabinet of United States coins ever formed. Included were many important gold rarities. Parmelee, a Boston bean baker by trade, would often purchase a collection intact in order to obtain a few pieces he desired.

MINT MARKS.

A Treatise on the Silver and Gold Coinage of the United States Branch Mints.

By A. G. Heaton.

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An advertisement in "The Numismatist," 1893, for the book on coinage of the branch mints written by Augustus G. Heaton. This publication set the stage for what would become in later years the main focus of collecting in America. In 1893 collecting by mintmarks was largely ignored.

At the Parmelee Sale many of the coins were bought in by the owner, with the result that Parmelee parceled out many rarities over the next few years. One cannot help but speculate that if the Chapman brothers had handled the Parmelee Collection, today it would be a numismatic byword, much as the Bushnell Collection sale (consisting of unwanted coins consigned by Parmelee) became when the Chapman brothers auctioned it, creating a numismatic sensation.

During the 1890s the most significant book in the field of American numismatics was a simple 54-page effort titled *A Treatise on the Coinage of the United States Branch Mints*, by Augustus G. Heaton. Published in 1893, the text gave compelling reasons why collectors should not confine their cabinets to simple accumulation by dates. Indeed, mintmarks had characteristics all their own, and these fascinating attributes were interestingly related by the author. Prior to this period, mintmark issues were virtually neglected. Indeed, no accurate list of what issues existed had ever been published. It still would take several decades before widespread interest was paid to mintmarks, however. In later years, noted Texas dealer B. Max Mehl related that in 1903-1904, when he began the coin business that was to bring him great fame, it was his custom simply to look at the date side of gold and silver coins when making an offer or appraisal. Whether or not a coin had a D, C, CC, O, or other mintmark made little financial difference.

It was not long thereafter that collectors realized that the addition of a tiny mintmark could make a great deal of difference in rarity and value. Perhaps some collectors took Heaton's advice which can be summarized as follows:

> The collection of the coinage of the branch mints of the United States, in addition to that of Philadelphia, will not only sustain interest in the nation's coinage as a whole, and especially in the issues of the last half century, but will be found worthy of the enthusiasm of both the young collector and the most advanced numismatist . . .
>
> As the premiums upon gold coin are relatively much lower than on any other, a collection of gold mintmarks would not be only a very interesting pursuit to the wealthy numismatist or to any prominent institution, but would prove neither extravagant nor unprofitable, for such a collection would be a distinguishing possession and, if bought prudently, would sell, if necessary, much closer to its cost than many miscellaneous collections of silver and copper which are thrown upon the market.

Still, in a decade in which a factory worker in Lowell, Massachusetts earned $7 per week, and this was before the advent of the 40-hour work week, few people had the resources to collect $5, $10, or $20 pieces by date, and this is without regard to mintmark variety.

At the same time interest in Proof gold coins was increasing. Mintage figures of the 1890s, taken as a whole, were larger than those of the preceding decade, and the initial years of the twentieth century saw a further increment.

Virgil M. Brand, Super Collector

The following biography of Virgil Michael Brand summarizes the life of one of the most important coin collectors ever to come upon the numismatic scene.

Born on January 16, 1861, in Blue Hill, Illinois, Virgil Brand became a famous, indeed *legendary*, collector of United States and world coins. After his death in Chicago on June 20, 1926, many rumors circulated concerning Virgil Brand and his holdings. Until relatively recent times Brand was considered a phantom to many collectors. Virtually everyone knows he had what was considered one of the finest and probably the very largest collection of coins ever formed by an individual, but few people know much about what he owned, how he collected, or who he was.

Virgil's father Michael came to the United States from Germany in 1848. He engaged in the trade of brewing and cooperage (barrel making). His first business was destroyed by the great Chicago fire in 1871. Soon thereafter he started a second, Brand Brewery. Michael had three sons, Virgil, Armin, and Horace. Apparently the art of brewing beer was not transferred to Virgil by his father, for he sought early employment as an accountant and bookkeeper.

By nature Virgil Brand was a very private man. For a person of such wealth he chose to live modestly in a seven room apartment above the brewery. It was here that he spent the greater part of his life engaged in his love of collecting books, stamps, but above all, coins. In his own quiet way Virgil was somewhat of a philanthropist and was well known for his availability when neighbors and employees were in need. He was always there to help, if he could, and often he made gifts of money.

It is not known how or when Virgil Brand developed his abiding interest in coins, but we do know that the first piece entered into his 30 volumes of recorded coin purchases was made on June 1, 1889. That historic coin was an 1851 $50 slug struck by Augustus Humbert and was purchased for $65 from a Chicago coin dealer of the time, S. C. Stevens. In the same purchase Brand acquired 17 other territorial gold coins and his first United States Mint gold issue, a 1799 eagle "13 stars, 5 facing, large stars," for $14.

He was an early member of the American Numismatic Association (number 87) but resigned from that organization in 1909 after the Montreal convention. He was also a life member of the American Numismatic Society, a charter member and at one time president of the Chicago Numismatic Society, and belonged to various European groups. It was to the Chicago Numismatic Society that Brand loaned a portion of his numismatic library so the knowledge could be shared with others. He often subsidized the club's striking of various medals. Of that society in particular he was a very active member, attending nearly all of their meetings, where he read papers and exhibited various pieces from his vast holdings. Although after his death numismatic scribes would characterize him as a recluse, it is apparent that around the turn of the century he was a very familiar figure in the Chicago coin collecting scene.

His collection encompassed every period and country and was considered even during his lifetime as being perhaps the greatest collection ever formed. It was often said, only partly in jest, that if a coin had been struck, Virgil Brand had an example. At the time of his death his collection numbered in excess of 350,000 pieces! Of that number some 68,000 were gold. More than 26,000 United States coins were among his holdings, and of that number nearly 7,000 were of gold.

While it is true that he purchased numerous duplicates (these were often the yearly Proof coins obtained directly from the Mint), his primary aim was to amass as complete a collection as possible and in the finest state of preservation. Often this meant having numerous examples of identical coins. Where Brand differed from most collectors was that upon securing a superior piece he seldom if ever disposed of the lesser examples. Like Lorin G. Parmelee before him, Brand often purchased collections intact simply to obtain a few needed specimens. Unlike Parmelee, Brand retained the entire collection. In this manner, to the consternation of many dealers, he purchased from under their noses such notable collections as those belonging to DeWitt Smith (which contained one of the finest groupings of United States territorial gold ever assembled, as well as a virtually complete series of Massachusetts silver, half cents and large cents by die varieties, and a complete set of $3 pieces, except for the 1870-S), Carl Wurtzbach, and Dr. Thomas Hall. By acquiring intact collections as well as buying at auctions, Brand acquired a staggering array of some of the greatest rarities. Included in his collection was an 1822 half eagle, two examples of the Brasher doubloon (the only person other than John Work Garrett ever to have had two examples), an 1804 silver dollar, two Cincinnati Mining & Trading Co. eagles,

two Pacific Co. eagles, two Kohler ingots, all three of the then known Templeton Reid $10 pieces, two 1815 half eagles, no fewer than 10 1876 $3 gold pieces, over 75 United States patterns struck in gold metal (including 30 $4 stellas), an 1804 $10 Proof restrike, at least four 1875 $3 gold pieces, all three of the then known 1793 Strawberry Leaf large cents, five 1792 silver center cents, and a vast array of other great rarities. His sets of Proof gold coins were complete in every denomination from 1858 onward, and for many years he had duplicate sets. The list is truly extraordinary and would take many pages to recite all of the highlights.

Through his various agents Brand made his desires known to virtually anyone with coins for sale. At many auctions he was the largest individual buyer, and at times he acquired more than half of the coins being sold.

When Brand began collecting, in 1889, many of the varieties known to present-day numismatists were as yet undiscovered, and collecting by mintmarks, which did not achieve any degree of popularity until around the turn of the century, was still virtually unknown. Nevertheless, it is difficult to imagine that many varieties could have slipped past him.

It has been said that he can be considered the ultimate collector, for while many numismatists passed by a coin they needed because the price was too high, Brand had no such reservation. Any coins which eluded his grasp did not do so because of lack of effort on his part. In nearly four decades of systematic collecting, Virgil Brand spent more than $3,000,000 on his collection, a sum which even today would amass a very respectable holding.

During the height of his activities Virgil Brand made his coins available to serious students and writers. Edgar H. Adams had access to his collection when he compiled his pioneering work on United States pattern coins. Other writers used his holdings to study die varieties and to expand the bounds of numismatic knowledge.

It is interesting to note that another great collector was a contemporary of his and preceded him as president of the Chicago numismatic society, William Forrester Dunham, whose collection was auctioned in 1941 by B. Max Mehl. It is rather amusing to note that these two gentlemen, each president of the same society, held at the same time the only two 1822 half eagles outside of the United States Mint Collection. Brand's 1822 half eagle was acquired for $800 from M. David, of New York City, on August 14, 1899. With that remarkable purchase were acquired half eagles of 1815, 1824, and 1826.

Brand was an ardent student of coins, not only as his collection verifies but as reports of his vast numismatic library (since dispersed) attest. He was constantly looking for new knowledge and was known to have discovered not only new varieties, but also was an authority who could quickly spot forgeries. He duly reported findings to other collectors. While president of the Chicago Numismatic Society he wrote to Theodore Roosevelt commending him in 1907 on improving the designs of this country's coinage.

Still, he was not without his eccentricities. It has been related that when Brand was measured for his suits he would make the tailor stand a few feet away from him and hold his tape up. Brand apparently was somewhat frightened of physical contact.

As the owner of a vast treasure trove of coins, he was often approached by individuals and institutions who wished one day to have the chance to handle his collection, either for sale or display. The most extraordinary of these offers came from the American Numismatic Society, a group that sent John Reilly, Jr. and Howland Wood to meet with Brand in an effort to secure the collection. The American Numismatic Society offered to construct a separate building to hold the collection, complete with living quarters for Virgil to occupy.

Many aspects of Virgil Brand's life have become legend, none more so than the story of his death. It has long been widely assumed that he died of food poisoning as a result of eating in an unsanitary restaurant. Although colorful, the story can be laid to rest. His demise was not nearly so dramatic; his death was due to a long bout with pneumonia.

Virgil Brand never married and had no descendants. After his death, the coins passed to other family members. Many were sold through the efforts of Burdette G. Johnson, the St. Louis dealer, and many others were marketed by Horace Louis Philip Brand, a brother. By 1981 most had been dispersed. A remaining block of over 20,000 specimens was owned by Jane Brand Allen, a niece of the collector. Following her death in 1981 the estate in 1982 chose to sell the remaining coins at auction.

An 1893 Visit to the Mint Cabinet

The following "tour" of the Mint Cabinet is taken from the 1893 edition of George G. Evans' Illustrated History of the United States Mint, *first published in 1885.*

The room in the Mint used for the Cabinet is on the second floor. It was formerly a suite of three apartments connected by folding doors, but the doors have been removed, and it is now a pleasant saloon 54 feet long by 16 wide. Eastern and western sections are of the same proportions, each with a broad window. The central section is lighted from the dome, which is supported by four columns. There is an open space immediately under the dome, to give light to the hall below, which is the main entrance to the Mint. Around this space is a railing and a circular case for coins.

The Cabinet of Coins was established in 1838 by Robert M. Patterson, then director of the Mint. Anticipating such a demand, reserves had been made for many years by Adam Eckfeldt, the coiner of the "master coins" of the Mint, a term used to signify pieces from new dies, bearing a high polish and struck with extra care. These are now more commonly called "Proofs."

With this nucleus, and a few other valuable pieces from Mr. Eckfeldt, the business was committed to the Assay Department, and especially to Mr. DuBois, assistant assayer. The collection grew year by year making exchanges to supply deficiencies, by purchases, by adding our own coin, and by saving foreign coin from the melting pot — a large part in this way, at a cost not more than their bullion value, though demanding great care, appreciation, and study. Valuable donations were also made by travellers, consuls, and missionaries.

In 1839 Congress appropriated the sum of $1,000 for the purchase of "specimens of ores and coins to be preserved at the Mint." Annually since, the sum of $300 has been appropriated by the government for this object. More has not been asked or desired, for the officers of the Mint have not thought to vie with the long established collections of the national cabinets of the old world, or even to equal the extravagance of some private numismatists; but they have admirably succeeded in their purpose to secure such coins as would interest all, from the school boy to the most enthusiastic archaeologist. The economic principle upon which the collection has been gathered is a lesson to all government departments in its frugality, as well as a restraint upon the natural tendency to extravagance which has heretofore distinguished those have a passion for old coins. There are thousands of coin collectors here in the United States, and fortunes have been accumulated in this strange way. More than one authenticated instance has been known in this country where man has lived in penury, and died from want, yet possessed of affluence in time-defaced coins.

Relics

In addition to portraits of the directors of the Mint, the collection contains numerous other objects of observation in addition to coins.

The first object in the Cabinet attracting attention is a framed copy of the law of Congress establishing the Mint, with its quaint phraseology with the signature of Thomas Jefferson.

In the first section, near the western window, is the assorting machine, the invention of a Frenchman, Baron Seguier, and which is now in use at the mint at Paris.

The planchets for coinage are liable to be a little too heavy or too light; it is therefore necessary, at least in the case of gold, to assort them by weighing. This machine is designed to enable one person to do the work of many. The planchets are thrown into the hopper at the rear, and, being arranged by the action of the wheel, slide down balances. By machinery beneath, they are carried one by one to the nearest platforms to be weighed. If too heavy, the tall needle of the beam leans to the right and lifts a pallet-wire, which connects with an apparatus under the table by which the planchet is pushed off and slides into one of the brass pans in front. If the piece be light, the needle is drawn over to the left and touches the other pallet, which makes a passage to another brass pan. If the piece be of true weight, or near enough, the needle stands perpendicular between the pallets, and the piece finds its way into the third brass pan.

On the opposite wall is the fine cast of Oliver Cromwell, a duplicate of one taken shortly after his

death. It was placed here by Mr. W. E. DuBois, who received it from H. W. Field, late assayer of the Royal Mint, London who was a defendant of the great Protector. Below the cast of Cromwell is a case showing progressive alloys of gold. The plates comprise gold alloyed to copper, gold alloyed to silver and gold fine.

In the eastern section are the standard Test Scales, used to test the weights sent to all the mints and assay offices in the United States . . . these scales are manufactured by employees of the Mint and have been in use more than a quarter of a century. The beam is hollow and is filled with Spanish cedar to guard against the effect of dampness. The bearings are edges of knife-blades, which impinge on a surface of agate plate. These scales are tested by the annual Assay Committee, which meets on the second Tuesday in February of every year.

Curiosities and Minerals

The most interesting objects of this curious display are three golden images from graves from the island of Chiriqui, off Central America. They were dug up in 1858 and sent to the Mint as bullion, to be melted. They are of pure gold, but the workmanship is very crude. The images are in the forms of a reptile, a bird, and a man with symbols of power in his hands, not unlike those designating Jupiter. There are also in the first section, two large cases with choice selections of mineral specimens, carefully classified and labeled. These are from well selected results of years of patient collecting and are deserving of more study than can be devoted to them by casual visitors. They are chiefly from different parts of the United States . . .

Near the exit door of the Cabinet, in a very large glass case, is a magnificent American eagle. It is superbly mounted, with grand breadth of wing and wondrous piercing eyes. The portrait of this "pet" can be recognized on the reverse of the pattern silver dollars of 1836, 1838, and 1839, and on the obverse of the first copper-nickel coined in 1856. " Peter" is the name which this noble bird recognized. He inhabited the Mint six years. He would fly about the city, but no one interferred with the going or coming of the "Mint bird," and he never failed to return from his daily exercise before the time for closing the building. In an evil hour he unfortunately perched upon a large fly wheel and, getting caught in the machinery, received a fatal injury to his wing, and thus ended rather an unusual career for an eagle.

Coin

[The text at this point gives the highlights of Greek, Persian, Egyptian, Syrian, Roman, Chinese, Japanese, and other ancient and foreign coins in the Mint Cabinet. United States Colonial coins are mentioned in detail, but issues among gold denominations, 1795 and later, are treated only in passing, with specific mention made of the following pieces:]

Among the rare coins in the Cabinet at the Mint is the double eagle. The dies for this piece were made in 1849, and only one was struck. It is "unique" and beyond price. There is also a quarter eagle of 1842 [this reference probably is to a quarter eagle dated 1841, for 1842 is a common date; however, the date 1842 appears in several texts describing the Mint Cabinet], and the only one known is at the Mint.

Gold Coins and Collectors
— 20th Century —

4

During the 1900s the number of coin collectors increased dramatically. The American Numismatic Association numbered among its members most active numismatists, the American Numismatic Society included many financiers and other prominent individuals on its roster, and auction sales were held with an increasing frequency. More and more, gold became prominent in auction offerings.

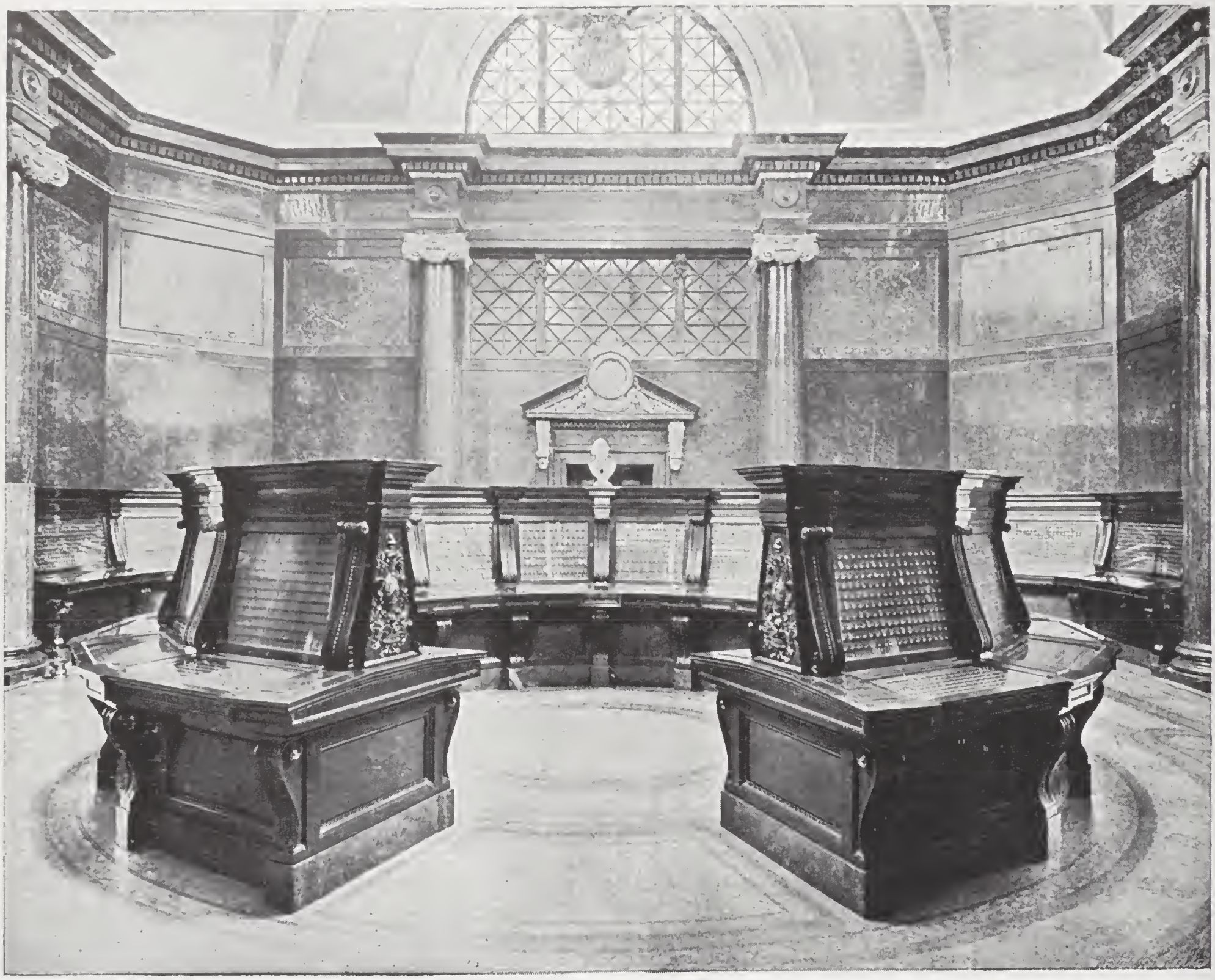
Two very important sales containing gold coins were held by Samuel Hudson and Henry Chapman in the early part of the decade. The John G. Mills Collection, sold in 1904, realized about $15,000 for nearly 2,000 lots. The collection contained many fine specimens of gold coins, including Proof examples of the 1821, 1834 with motto, and 1837 quarter eagles, not to overlook Proof examples of later dates of the same denomination: 1858, 1863, and 1875. These six Proof issues eventually were acquired by Louis Eliasberg.

Harlan P. Smith, who furnished the capital for the New York Coin and Stamp Company (which offered the Parmelee Collection at auction) sold his coins through the Chapman brothers in 1906. The numismatic highlight of the auction was the 1822 half eagle purchased by Smith earlier for $6. An interesting story relates to this particular coin. When Smith was working with the Parmelee Collection, it was determined that the 1822 half eagle in that group was a forgery. So the collection would be complete in the half eagle series, Smith offered his own specimen in the sale, with no intention of selling it, and reacquired it at the $900 level. In 1906 the coin realized $2,165, the highest price recorded at the event and the highest price realized for a coin up to this time. The purchaser was William Forrester Dunham, who would keep the coin for over 30 years.

Smith had acquired a vast array of gold coins, including the famous 1815 and 1819 half eagles as well as an 1821 Proof, the previously-mentioned 1822, an 1827, an 1828/7 overdate, and an 1828 perfect date. These pieces were to later go to the Eliasberg Collection. Certainly the Smith Collection sale did much to publicize the appeal of forming sets of United States gold coins and established half eagles as the prime rarity series in the field of gold coin collecting.

The Chapman brothers dissolved their relationship in 1906, after which each went his own way to auction and catalogue coins in a similar manner as before, usually with the aid of impressive catalogues. Samuel Hudson Chapman went on to hold nearly 30 sales, including the collections of Wilson, Jewett, Gable, Hunter, Beckwith, Alvord, and Simpson, while Henry Chapman catalogued another 50 sales including those of Stickney (noted earlier as having many gold coins), Zabriskie, Earle, Steigerwalt, Bement, Jackman, Nygren, Jenks, and others. Both died in the 1930s.

The first decade of the twentieth century saw the entry of B. Max Mehl into the coin business. Mehl, born in Lithuania in 1884, settled in Fort Worth, Texas, where he spent his life until his death in 1957. His interest in numismatics began during his teenage years. In 1903 his first advertisement appeared in *The Numismatist*. Over the ensuing half century he held over 100 auction sales, including the properties of Granberg, Nygren, Sears, Manning, Ten Eyck, Slack, Grinnell, Roach, Olsen, Atwater, Neil, Geiss, Green



The Mint Cabinet or coin collection as it appeared in the Philadelphia Mint shortly after the turn of the century.

and what was to be his most famous sale of all, the William Forrester Dunham Collection sold in 1941. Mehl did more to publicize coin collecting than any other dealer during his lifetime.

Mehl became a familiar face at coin conventions, and for those who could not attend these events, his face was often seen in advertisements in *The Numismatist* and, later, *The Numismatic Scrapbook Magazine*, as well as other publications. The greater part of his advertising budget was reserved for non-numismatic periodicals, however. During the depth of the depression he proudly proclaimed he had spent $16,500 in one instance for an advertisement in Sunday newspaper supplements, and at one time he even sponsored a radio show. While Mehl made no pretense at being a numismatic student — he would leave that to others — he prepared catalogues with colorful descriptions unequalled in his day, often spiced with many exclamation points and tales of personal experiences. Today, his catalogues make lively and entertaining reading. Clearly, they contributed much to the flavor of the numismatic era in which they were produced. In recognition of his many contributions to the hobby, the American Numismatic Association once gave him a special award. Certain of Mehl's descriptions of rare half eagles are quoted in the chapter on that denomination in this text.

In 1906-1907, new designs for the $10 and $20 pieces by noted sculptor Augustus Saint-Gaudens were developed in close cooperation with President Theodore Roosevelt. The double eagle in particular, with the date expressed as MCMVII, was widely admired. In 1908 the quarter eagle and half eagle were redesigned by Bela Lyon Pratt, a Boston sculptor.

The first book devoted exclusively to American gold issues made its appearance in 1909. Edgar H. Adams, a prolific scholar with interests in many numismatic specialties, was the author of the *Official Premium List of United States, Private and Territorial Gold Coins*. The volume was a compilation of prices realized at recent public auctions.

In the introduction, Adams states the purpose in bringing attention to this area of numismatics:

> Many rare gold coins are circulating throughout the United States, unappreciated in passing for only their face value, that would be highly prized by collectors. These coins embrace many of the issues of the United States prior to 1860, with their various mint letters.
>
> With the regular United States coins, there is no reason why a careful watch of all the gold coins in circulation should not result in the uncovering of some of the great rarities that now command the highest premiums.
>
> A collector who devotes his attention to the accumulation of the gold pieces is not satisfied that he has a complete representation of every coin issued under the United States authority unless his cabinet contains specimens of each denomination, of each year, and bearing the mint letter of every one of the mints.
>
> This book should be particularly useful for reference to all gold coin collectors and those interested in gold coins.

An analysis of the book reflects the degree of interest in 1909 given to each of the regularly issued United States gold coins.

Gold dollars, quarter eagles, $3 pieces, and half eagles are listed nearly in their entirety and mintmark issues are described. However, very little recognition was given to quarter and half eagles after 1860.

Eagles are listed from 1795 to 1804 with the comment, "Very few of the ten-dollar pieces issued after 1804 bear a premium . . . nearly all of the eagles issued from 1838 up to 1907 are omitted, and bearing as a rule such small premiums, if any, that mention of them is scarcely worth while."

Regarding twenty-dollar pieces, Adams comments that "Not many of the double eagles command a premium, for the reason that there are only a few collectors who gather the denomination."

Today numismatists recognize that the gold series after 1860, particularly the large denominations, contain many extreme rarities. A glance through David Akers' remarkable series of volumes covering auction appearances of gold coins, shows that there are numerous varieties of which not a single specimen is known in Uncirculated grade. These pieces were issued at a time when coin collecting in general was widespread and intense in the United States, but little interest was given to collecting gold coins by mintmarks or even by dates, particularly for the larger denominations. Indeed, Edgar H. Adams' 1909 comments concerning the collecting of $10 and $20 pieces hardly spurred additional interest in this series. The result of this lack of attention during the late nineteenth and early twentieth cen

Introduction

Many very rare gold coins are circulating throughout the United States, unappreciated and passing for only their face value, that would be highly prized by collectors. These coins embrace many of the issues of the United States prior to 1860, with their various mint letters, and also include quite a number of coins issued since 1860.

With the regular United States coins there is no reason why a careful watch of all the gold coins in circulation should not result in the uncovering of some of the great rarities that now command the highest premiums. Of the high-priced gold coins, such as the half eagles, or five-dollar gold pieces, of 1815 and 1822, it is not unlikely that there are still somewhere to be found specimens in addition to the dozen or so now known which have brought such tremendous premiums. Of the former date the mint records show that 635 were made, while of those dated 1822 the records state that 17,796 were minted.

Every trifling variation in the design of a coin, such as a date or mint letter, gives it a particular interest in the estimation of collectors. A collector who devotes his attention to the accumulation of the gold pieces is not satisfied that he has a complete representation of every coin issued under United States authority unless his cabinet contains specimens of each denomination, of each year, and bearing the mint letter of every one of the mints.

Often the coins of a certain year that were issued at the Philadelphia mint are of the commonest character, and command but a small premium. On the other hand, during the same year but a limited number of coins of the identical design, with the single variation of the mint letter, may have been issued at one of the branch mints, making each coin of this stamp worth dozens of times its face value.

An example of this is shown in the case of the gold dollar of 1854. The Philadelphia issue is worth but little in excess of face value, while the one of the same design and date, but showing in addition the tiny letter "C" for the branch mint located at Charlotte, N. C., would be worth several hundred dollars. This is also true of the gold dollar dated 1861. The one bearing the latter date, struck at Philadelphia, has brought $5.25, while the same design, but with the letter "D," for the Dahlonega, Ga., mint, has sold for $280. Scores of others of all denominations will be observed by studying this list.

The $2.50 and $5 gold pieces struck after 1860 are not scarce, with but few exceptions, and are usually sold in full proof sets, which embrace all the gold denominations of the year.

Introductory page to "Adams' Official Premium List of United States Private and Territorial Gold Coins," published in 1909 by Edgar H. Adams. The volume, a compilation of auction records, listed prices and collecting information.

turies is that today it is impossible, even in a theoretical way, to assemble a date and mintmark set of $10 and $20 pieces of the Liberty head style in Uncirculated grade.

In his study of quarter eagles published in the 1960s, Walter Breen noted that 1841 $2.50 pieces were unknown to numismatists until Adams published his book in 1909. The latter stated in his discussion of 1841 quarter eagles that "only two of these coins are known to be in existence." However, neither Adams nor Breen were aware that the 1841 quarter eagle was not only known to numismatists years earlier, but actually was illustrated on a plate in the pioneering book published in America for coin collectors in 1842 by Eckfeldt and DuBois, *A Manual of Gold and Silver Coins of All Nations, Struck Within the Past Century*. Further, James Ross Snowden's *A Description of Ancient and Modern Coins in the Cabinet Collection at the Mint of the United States*, published in 1860, shows that 1841 quarter eagles were manufactured as "patterns," probably a reference to Snowden's knowledge that pieces may have been produced only as Proofs and that none were made for regular circulation. Moreover, studies of nineteenth century auction catalogues and other publications by Dr. Richard A. Bagg, research associate for the present volume, unearthed several listings of 1841 quarter eagles without mintmarks. The situation regarding the 1841 quarter eagles was compounded by errors in at least two nineteenth century guides for visitors to the Philadelphia Mint. Specific mention is made of the rarity of the *1842* quarter eagle, actually a common date. Presumably, the 1841 quarter eagle was to have been highlighted, but a typographical error was printed, and this error was repeated by the second publication.

The late nineteenth and early twentieth centuries saw intense research conducted for die varieties of many United States copper and silver issues, particularly colonial coins and large cents. At the time, early gold coins received very little attention, and later gold coins, particularly those after 1834, were virtually completely ignored. Only in recent decades has information concerning die varieties and rarities been available on a widespread basis. There are still some mysteries remaining to be unravelled. For example, was there ever such a coin as an 1841-O half eagle? Refer to the specific discussion of this coin in the half eagle chapter.)

Another interesting coin studied by Edgar H. Adams is the 1870-S $3 gold piece:

> Only one specimen of this coin is known, this being now in the possession of a well-known New York collector. It is said that the dies were used by a coiner of the San Francisco Mint to strike two specimens in 1870. One of those was placed in the cornerstone of a public building of that city. The mint records do not mention the issue of a coin of this denomination and letter.

The "well-known New York collector" was William H. Woodin, who a few years later was to collaborate with Adams in the publication of the first reference book on pattern coins, *United States Pattern, Trial, and Experimental Pieces*. The statement that two were struck in 1870 may have been fiction, for the mint records consulted by Adams specifically stated that just one was made and this coin was put in the cornerstone of the new San Francisco Mint building initiated that year (and opened for business in 1874). Perhaps his friend William H. Woodin did not want to arouse any controversy concerning the fact that he possessed the 1870-S $3 and the cornerstone of the building did not! It has been reported that the cornerstone in question was later opened, but it contained no example of the 1870-S $3. Was one struck? Were two struck? No one knows.

Edgar H. Adams was born in Grafton, West Virginia on April 7, 1868. He was incapacitated for much of his early life because he had been accidentally shot in the leg by a friend when he was very young.

His initiation into numismatic writing began in 1900 with articles published in the *New York Sun*. He soon became a prolific writer on the subject and his articles appeared in the *American Journal of Numismatics*, *The Numismatist*, and elsewhere. During the 1912 to 1915 years he served as editor of *The Numismatist*, official journal of the American Numismatic Association. Under his direction the editorial content and number of interesting articles published reached new highs. Later he edited Wayte Raymond's *Coin Collector's Journal*, published in the 1930s. After the publication of his premium list of gold coins in 1909, he wrote *The Private Gold Coinage of California, 1849-1855*, which today serves as a landmark reference in the field.

The year 1909 saw the near completion by William H. Woodin of an unpublished typescript

titled *The Half Eagle And Its Varieties, Embracing All the Productions of the Five-dollar Dies from 1795 to 1907, Including Issues of the Branch Mints, Together With All the Varieties of the Mint Letters.* The work, as it stood in 1909 (no additional text was ever added), was unfinished for it covered only the period from 1795 through 1849. Woodin stated in the preface:

> The half eagle is easily one the most interesting of the coin denominations of the United States. Ever since coin collecting has been followed in this country, this coin has been an especial favorite with collectors. Possessing over three hundred varieties, perhaps more than any other series of coins of this government, the half eagle embraces the most costly of the regular gold coins, such, for instance, as those dated 1815 and 1822, not to speak of dozens of other rarities, among which may be mentioned the five-dollar piece of 1798 with small eagle reverse.
>
> Even when gold coins of other denominations were held in little regard by American collectors, still the half eagle was eagerly sought by them, and high premiums were paid for specimens of this denomination many years ago when other United States gold coins would bring no more than face value and when in certain cases a greater sum could be realized from the assay office than from the collector.

Woodin's case made for collecting half eagles was echoed by collectors of the period who paid $2000 for the 1815 half eagle at the Stickney Sale and $2165 for the 1822 of the same denomination at the Smith Sale. Decades later, these record prices would seem to be unbelievable bargains.

Woodin was born in Berwick, Pennsylvania on May 27, 1868. He graduated from the Columbia School of Mines in 1890. Later, he became president of the American Car and Foundry Company. With an ardent interest in music, he composed a children's book of songs, popular pieces, and five symphonies, one of which was performed by the Berlin Philharmonic Orchestra.

In 1933 he became secretary of the Treasury under Franklin D. Roosevelt. However, he had to resign his post because of illness. He died in May 1934.

Always interested in numismatics, Woodin participated in many of the great auctions during the 1890-1910 period. As noted, he helped Adams with the first book on United States pattern coins (published in 1913), after a great controversy developed in 1909 regarding two unique patterns which were purchased by Woodin from John Haseltine and Stephen Nagy of Philadelphia, who were liquidating the William Idler holdings.

It was reported that Woodin paid $10,000 each for two 1877 half unions, or $50 pattern coins, struck in gold. Adams states, "These two gold pieces have not been seen since the year of their mintage, 1877, and were supposed by all collectors to have been melted up." Later, these two specimens were seized by the United States government and as compensation, the sellers, Haseltine and Nagy, gave Woodin "several trunks" of patterns.

Woodin's 1909 study of half eagles was intended to be the first of its kind covering a die variety study of a denomination of United States gold coins. However, the project died during its creation, and no further studies resulted.

Collector interest in gold coins increased sharply during the first decade of the twentieth century. The publication of the Adams book in 1909, auction descriptions of rare gold coins together with record prices realized, the new gold issues by Augustus Saint-Gaudens in 1907 and Bela Lyon Pratt in 1908, growth of the American Numismatic Association, the increased interest in collecting mintmark varieties as a result of Augustus Heaton's 1893 treatise, and other factors contributed to this increased interest. Mintages of Proof gold coins for the decade were sharply higher than comparable figures for the 1890s.

The second decade of the new century saw Woodin's superb collection sold at auction by Thomas L. Elder in 1911. In an article prepared by Woodin for *The Numismatist*, "The Commercial Element in Numismatics," the author stated:

> I am very desirous of proving that the Science of Numismatics is a paying investment if a collection can be formed with some judgment. An important and scientific collection of anything cannot be formed unless the collector is intensely interested in the subject and willing to devote much time to the study of all matters closely to the line he has selected.
>
> I did manage to form a collection of United States gold when many were not interested in it . . . I began on the half eagles and I might say I am still collecting them.
>
> [J. Colvin] Randall used to say to me "United States gold coins are the cheapest things in the world today (1888). Collectors pay hundreds of dollars for specimens of other issues and won't pay twenty dollars for half or quarter eagles of which only four or five are known. You pick up United States gold and ten years

Gold Dollars

1849 Closed Wreath
Type I Design
1849-1854

1855
Type II Design
1854-1856

1857
Type III Design
1856-1889

1849-D

1852-C

1854-S

1855-D

1856-D

1860-D

1861-D

1875

1877

Color Plate 1

Quarter Eagles ($2½)

1796 Without Stars

1796 With Stars
Type of 1796-1807

1806/5 Overdate
Six Stars Facing

1808
Only Year of Type

1821
Type of 1821-1834

1831

Quarter Eagles ($2½)

1833

1834 With Motto

1835
Type of 1834-1839

1839-D

1863
Type of 1840-1907

1909
Type of 1908-1929

Quarter Eagles ($2½)

1841 Proof — "The Little Princess"
(enlarged)

1848 "CAL"
(enlarged)

$3 Gold Pieces

1854

1855

1857

1875

$3 Gold Pieces

1870-S
Only One Known
(enlarged)

$3 Gold Pieces

1870-S
Reverse

$4 Gold Stellas

1880 Coiled Hair $4
Obverse (enlarged)

1879
Flowing Hair

1879
Coiled Hair

1880
Flowing Hair

1880
Coiled Hair

Half Eagles

1795
Small Eagle Reverse

1796/5
Small Eagle Reverse

1797
Small Eagle Reverse

1798
Small Eagle Reverse

1795
Large Eagle Reverse

1797/5
Large Eagle Reverse

1809/8
Type of 1807-1812

1815
Type of 1813-1829

1818
5D Over 5O on Reverse

1819
5D Over 5O on Reverse

1820
Square Base 2

1820
Curved Base 2

1821

1822

1824

1822 Half Eagle, Obverse
Finest of Three Known Specimens
(Two of which are in the Smithsonian Institution)

Half Eagles

1825/4

1826

1827

1828/7

1828

1829
Large Planchet

1829
Small Planchet
Type of 1829-1834

1830
Small 5D

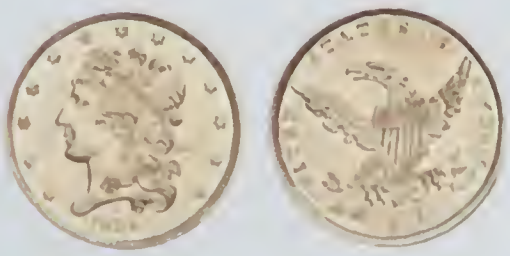
1831
Small 5D

1832
12 Stars

1832
13 Stars

1834
With Motto
Plain 4 in Date

1834
No Motto
Plain 4



1838-D
Type of 1834-1838

1841
Type of 1839-1866

Half Eagles

1825/4 Obverse
(enlarged)

1832 12 Stars
(enlarged)

Half Eagles

1854-S
Finest of Three Known

Half Eagles

1845-D

1846-C

1857

1858

1875
Type of 1866-1908

1876-CC

1887

1904-S

1907-D

1909-O

1929

1910 Obverse
(enlarged)

Eagles

1795
Type of 1795-1797

1798/7
4 Stars Facing

1798/7
6 Stars Facing

1799
Type of 1798-1804

1804
Crosslet 4

1804
Plain 4

1839
Large Letters

1846
General Type of 1838-1866

Eagles

1851-O

1857

1858

1863

1875
Type of 1866-1907

1907 Saint-Gaudens
Regular issue, no periods
Type of 1907-1908

1920-S
Type of 1908-1933

1933

Eagles

1907 Saint-Gaudens
Rolled Edge
Periods before and after legends

Double Eagles

1854-O
Type of 1850-1866

1856-O

1859

1861-S
Paquet Reverse

1862

1865

1866
Type of 1866-1876

1875

Double Eagles

1876

1878
Type of 1877-1907

1881

1882

1883

1885

1886

1887

1884 Obverse
(enlarged)

1884 Reverse
(enlarged)

MCMVII (1907) Extremely High Relief
Obverse (enlarged)

MCMVII (1907) Extremely High Relief
Reverse (enlarged)

Double Eagles

1907 Saint-Gaudens
Type of 1907-1908

1910
Type of 1908-1911

1920-S
Type of 1912-1933

1930-S

1931

1927-D

1927-D
Obverse

from now you will find them bringing the highest prices of all the issues."

My collection of $3 gold pieces, which was practically completed many years ago, cost me between $500 and $600. This, of course, does not include the 1870-S piece, which I obtained several years ago. You will notice in my sale that the 1875 three-dollar gold piece brought $610, which is more than the whole collection cost.

At the auction the 1870-S $3 brought $1,450. Appearing as Lot 1160, the coin was described as follows by Elder:

1870. San Francisco. General type identical to preceding, but the mintmark is smaller and narrower than usual. Over the wreath on reverse appear two or three minute scratches, which are hardly noticeable to the ordinary eye. The piece evidently at one time had a loop attached. The milling appears regular. A reserved price of $1,000 is placed upon this lot.

Several of the greatest numismatists in the United States, who have given the coin careful examination, say the piece is authentic and official, basing their decisions more on its general appearance and workmanship than on any written certificate or letter.

Undoubtedly this is the most remarkable gold coin of the regular series and is, naturally the only one which will ever be offered at public or private sale.

The piece was subsequently acquired by Waldo C. Newcomer. After going through several hands it was aquired in the 1940s by Louis Eliasberg.

Although interest in United States gold coins by mintmark variety was growing, still the number of dedicated numismatists in the field could probably be counted on the fingers of one hand alone. In fact, mintmark varieties were still being discovered. As an example, Edgar H. Adams could not locate a record of public sale for the very rare 1854-S quarter eagle when his book was published in 1909. Writing in the May 1911 issue of *The Numismatist*, Adams stated:

. . . for the benefit of especially the quarter eagle collectors, the long-sought-for 1854 $2.50 gold piece from the San Francisco Mint has come to light, and is now in the collection of Mr. H. O. Granberg of Oshkosh, Wisconsin. This rare mintmark recently came to Mr. Granberg's notice, and of course was carefully examined by him. It was found to be authentic beyond a doubt. Mr. [Samuel] Hudson Chapman has also examined the coin and has stated that it was the only specimen of the variety that had ever been located.

Quite possibly this specimen referred to is the one discovered by B. Max Mehl around 1910 and is said to have come to light in a western bank. Walter Breen believes this coin subsequently went to John H. Clapp, then to Louis Eliasberg.

During the second decade of the twentieth century a prominent dealer appeared on the scene. Wayte Raymond, who went on to achieve great status and recognition from numismatists, often featured gold coins among his early advertisements. In 1910 Raymond, who lived in South Norwalk, Connecticut at the time (he later relocated to New York), advertised that he "begged to announce a sale at public auction in New York City early in December, positively the finest collection of quarter eagles ever offered . . . Collections of rare coins solicited for sale at auction or bought outright . . ."

In 1912 he penned one of the first advertisements to specifically point out the benefits of coins for investment purposes, emphasizing gold issues in particular:

COINS AS AN INVESTMENT.

Many harsh words are said about collectors who engage in natural speculation as to whether or not the coins they are buying today will have appreciated in value ten years from now.

Numismatists of the old school tell us that the true collector is not interested in any such appreciation in the value of his collection but derives his entire profit and pleasure from the coins while in his hands.

We feel, however, that the average American collector, while he greatly enjoys his coins, also feels very pleased if when disposing of his collection he realizes a profit. We know of no other series of coins more likely to materially increase in value than United States gold. Very few collectors at present realize the rarity of the early gold of our country. We must remember that few of our early citizens boasted of any great fortunes, and while a number of silver and copper coins may have been laid to one side and saved, it is very unlikely that many gold coins were preserved.

It is probable that the floating supply of these coins is about all there is in existence.

We have a splendid stock of all United States gold coins and we'll send our catalogue of these with prices marked.

At the time, Raymond was doing business at the United States Coin Company with offices at 200 5th Avenue, New York City. Around this time he solicited the interest of B. Max Mehl in forming a partnership, but such a relationship never materialized. Had the arrangement been completed, numismatic history today would undoubtedly be vastly different.

Born in Connecticut in 1886, Raymond lived until 1957. One of the most prolific numismatic writers of the twentieth century, he produced during his lifetime over 150 auction sales and over 100 books and articles. In 1923, with John Work Garrett, he purchased for $100,000 the collection of Colonel James W. Ellsworth. Under this arrangement Garrett received the first choice of the numerous rarities it contained.

In 1934, after joining J. W. Scott and Company, he began publishing the *Coin Collector's Journal*, which survived until the 1950s. During the later years of his life he was an encouraging influence to both John J. Ford, Jr. and Walter H. Breen, two of the most eminent numismatic scholars the hobby has ever known.

During the second decade of the century, the Earle Sale held by Henry Chapman and the Granberg Sale held by B. Max Mehl, both contained gold rarities and attracted a wide bidding audience.

In 1912-1914 the Bureau of the Mint published the *Catalogue of Coins, Tokens, and Medals in the Numismatic Collection of the Mint of the United States at Philadelphia, Pa.*, a monumental work of 694 pages, listing and illustrating highlights from the Mint holdings. Prepared by T. L. Comparette, curator of the exhibit, descriptions of the gold coins were sparse, and were limited to brief commentaries inserted for each year a new design was instituted. Great rarities, unless they constituted the first year of a new design, were described tersely, such as: "Half Eagle, 1822. Similar to number 269 [the 1813 half eagle design] except date" and "Quarter Eagle, 1841. Similar to number 430 [design of 1840] except date." The listing revealed that the Mint Collection had only a few scattered mintmarked issues. Like other collectors of the time, the various curators of the Mint during the nineteenth century did not consider the presence of a C, D, or other mintmark to constitute a variety significant enough for inclusion. Still, the 1912 catalogue was widely distributed among collectors and undoubtedly served to engender additional interest.

In 1914 the American Numismatic Society mounted an exhibition of United States coins, obtaining outstanding specimens from many private collectors. Virtually a complete collection of United States issues was shown, including the superb half eagle holdings of William H. Woodin. Visitors to the exhibit were able to see two specimens of the 1819, one of two known 1821 Proof half eagles, an 1829 small date, and an 1832 curved 2 half eagle with twelve obverse stars.

During this era the Philadelphia Mint abandoned the traditional mirror-like Proof surface in favor of the Matte Proof or sandblast Proof technique and its variations as first popularized by the Paris Mint. This type of finish, popular with medalists, served to highlight design features. While Matte Proofs were possibly in favor with museum curators, the public strongly preferred the old-style mirror-like finish, with the result that orders from collectors declined sharply. The result today is that among Proof gold coins of the 1908-1915 varieties are numbered some of the greatest American numismatic rarities.

A survey of total Proof production figures from 1860 to 1915 reveals that over 27,000 Proof gold specimens were made with about 23,000 being of the Liberty head design. The Matte Proofs and related variations account for 4,359 pieces. A further breakdown of mintage figures for the 1860-1915 span reveals that 8,551 gold dollars, 5,988 quarter eagles, 1,507 $3 pieces, 4,221 half eagles, 3,374 eagles, and 3,718 double eagles were made. However, as explained in detail in the following chapters treating individual gold denominations, production figures of Proof gold coins in many instances apparently bear little relation to the number of pieces actually distributed. Gold Proofs in many instances were rarities within a few years of their original issue.

The 1920s saw the fabulous collection of John Story Jenks auctioned by Henry Chapman and the James Ten Eyck coins sold by B. Max Mehl.

John Story Jenks, who was born near Baltimore in 1839, began collecting coins in the 1850s while a young man. His numismatic activities covered a long span of time. Following the sale of his coins in 1921, Jenks lived two more years, dying in 1923.

His fabulous collection was so large that it had to be sold over a ten-day period. The catalogue featured 7,300 lots and realized $61,379.46, thus making it the greatest sale ever held in the United States up to that time.

Included in the Jenks holding was a fine array of United States gold coins with many desirable quarter eagles, half eagles, and eagles. His most

Group photograph of those attending the 1914 Convention of the American Numismatic Association, Springfield, Massachusetts. By 1950 the attendance at this annual event passed the 500 mark, and by the early 1980s many thousands attended each year.

Founded 1875 Bell Telephone Locust 6755

HENRY CHAPMAN
NUMISMATIST

333-335 S. 16th St., - Philadelphia, Pa.

America's Leading Numismatic Dealer

Greatest Sale Ever Held in This Country

The Unrestricted Sale of the

Collection of the COINS OF THE WORLD,

The Property of

JOHN STORY JENKS,

Will be held at absolute Public Auction,

DECEMBER 7th to 17th, Inclusive,

AT

333 and 335 South Sixteenth Street, Philadelphia.

DANIEL R. KENNEDY, Auctioneer.

Catalogues now ready for distribution.

Plain catalogue, 4to, bound in boards, price $1.

Plate catalogues will be supplied before the sale, embellished with 42 plates made directly from the coins, and being photographs, not process plates, the condition of the coins may be readily judged. A printed list of prices obtained at the Sale will be supplied after the Sale free to subscribers to the plate catalogue. Price of plate catalogue and price list, $20.

After the sale a price list will be printed and sold separately (no catalogue), price $2.50.

After the sale the plain catalogue will only be sold with the price list bound in, price $5.

Expressage prepaid on all issues by the publisher.

Please remit with order and register your subscription without delay. Edition limited and many orders entered.

The catalogue is 7302 lots, 653 pages, 4to.

Coins of every series, Ancient and Modern, represented, all in very fine, uncirculated and proof condition. Something for every collector.

GET YOUR BIDS IN AS EARLY AS POSSIBLE.

1921 announcement by Henry Chapman of the "Greatest Sale Ever Held in This Country," the property of John Story Jenks. The immense offering included 7,302 lots and spanned ten days. Numerous price records were set.

important coronet-style eagle was a Proof 1839 which brought $105, a high figure at the time. Lot number 5768, an 1825/4 half eagle, described as Extra Fine, attracted little attention and brought $200, the purchaser being L. G. Kaufman. Years later scholars would conclude that this was one of the greatest of all American gold coin rarities with only two extant.

The James Ten Eyck Collection sale, held by B. Max Mehl in 1922, was another monumental offering. Ten Eyck, who was born in Albany, New York in 1840, and who died there in 1910, began his interest around the Civil War era. He was associated with Bacon, Stickney & Company, coffee and spice merchants, for nearly his entire life. According to B. Max Mehl, his "numismatic interest did not extend into the mintmarks or die varieties. He was interested only in completing the collection to represent the coinage of the United States from its earliest colonial period."

Later, Dr. Henry W. Beckwith, who is remembered today as the owner of a superlative collection of large cents, remarked that the Ten Eyck Collection was exhibited in a museum following the owner's death. It would not have been sold except that there were fears for its security. Beckwith noted that "during the noon hour there is only one person in the museum, a girl only 22 years old. A couple of thugs could overpower her and make off with the collection in fifteen minutes."

The Ten Eyck Collection contained nearly a complete gold offering from 1795 to 1834, including Proof bust-type quarter eagles, an 1834 quarter eagle with motto, an 1875 $3, and many splendid half eagles, including a 1798 small eagle $5, 1815, 1819, and an example of the 1829. Eagles were complete from 1795 to 1804. Gold Proof sets included a complete run from 1891 to 1909. These sets, with a face value of $37.50 brought only $42 to $44.50, indicative that the great appreciation for gold rarities was yet to come, particularly for rarities in the larger denominations.

During the 1920s a new collector appeared on the numismatic scene. He would go on to assemble the most complete collection of regular issue United States gold coins ever put together. The man's name was Louis E. Eliasberg, Sr. Also, his collection of copper and silver coinage would be unsurpassed.

Very precarious economic circumstances were prevalent in the United States during the early 1930s. It was during this period that B. Max Mehl acquired on a consignment basis the collection of Waldo C. Newcomer, who died shortly thereafter (in 1934). His collection of United States coins was nearly complete. In November 1931 Mehl announced that the United States portion of the Newcomer Collection had been placed with him. The valuation was approximately $250,000. A highlight among the pieces consigned was the famous 1870-S $3 piece which earlier had appeared in the William H. Woodin auction sale.

In April 1933 it was announced that no more gold coins would be manufactured by the government and that, further, all gold coins were to be surrendered to the United States Treasury, with the exception of certain pieces of numismatic value. By this time collecting gold coins, especially larger denominations, by mintmark varieties was still not in the mainstream of interest to most collectors, and little attention was paid to what pieces had been struck during the previous decade, and by which mints. As a result, 1933 and 1934 came and went, and untold millions of rarities were melted. In retrospect, anyone who heeded the advice of Wayte Raymond, William H. Woodin, and others who suggested that gold coins might be a fruitful area for investment, made fortunes by investing in these coins.

1934 saw the inception of Wayte Raymond's *Coin Collector's Journal* under the sponsorship of J. W. Scott and Co., a firm famous in the stamp field but with credentials in numismatics dating back to the preceding century. More importantly, in the same year Wayte Raymond produced the first edition of *The Standard Catalogue of United States Coins.* This was the first catalogue to be issued on a periodic basis listing all of the United States series by date, mintmark, and grade while also providing approximate valuations. *The Standard Catalogue* continued until the 1957 edition, the 18th, when it ceased publication after the death of Wayte Raymond.

Raymond had an interest that went beyond date and mintmark listings and values. He encouraged scholarship, and although it probably was not in his best financial interest to do so, occasionally he would devote a sizable section of the reference to tokens, patterns, or other series not in the mainstream of collector interest. He

As I am awfully busy trying to rush out the Ten Eyck Catalogue, I'll just repeat that

THIS IS NOT A

Numismatist's Dream!

But each of the following great rarities are in my "Next Sale"—

Brasher Doubloon.
1804 Dollar.
1838 Dollar.
1796 Half Dollar.
1823 Quarter Dollar.
1827 Quarter Dollar.
1802 Half Dime.
1798 $10.00 Gold, 2 varieties.
1798 $5.00 Gold, Small Eagle.
1815 Half Eagle.
1819 $5.00 Gold.
1797 $2.50 Gold.
1826 $2.50 Gold.
1834 $2.50 Gold, With Motto.
1875 $3.00 Gold Piece.
Mormon Twenty.
Baldwin Ten, 1851.
Washington N. J. Cent.
Unique N. J. Cent 1786.
New Hampshire Cent.
Virginia Shilling.
Washington Silver Half Dollar.
Washington Constellatio Cent.
Hundreds of Foreign Gold and Silver.

The above are just a "Few" of the great rarities in my Sale of the Renowned James Ten Eyck Collection!

I am now preparing catalog. It will be the finest I have ever issued. Large size, beautiful plates, full historical data, etc.

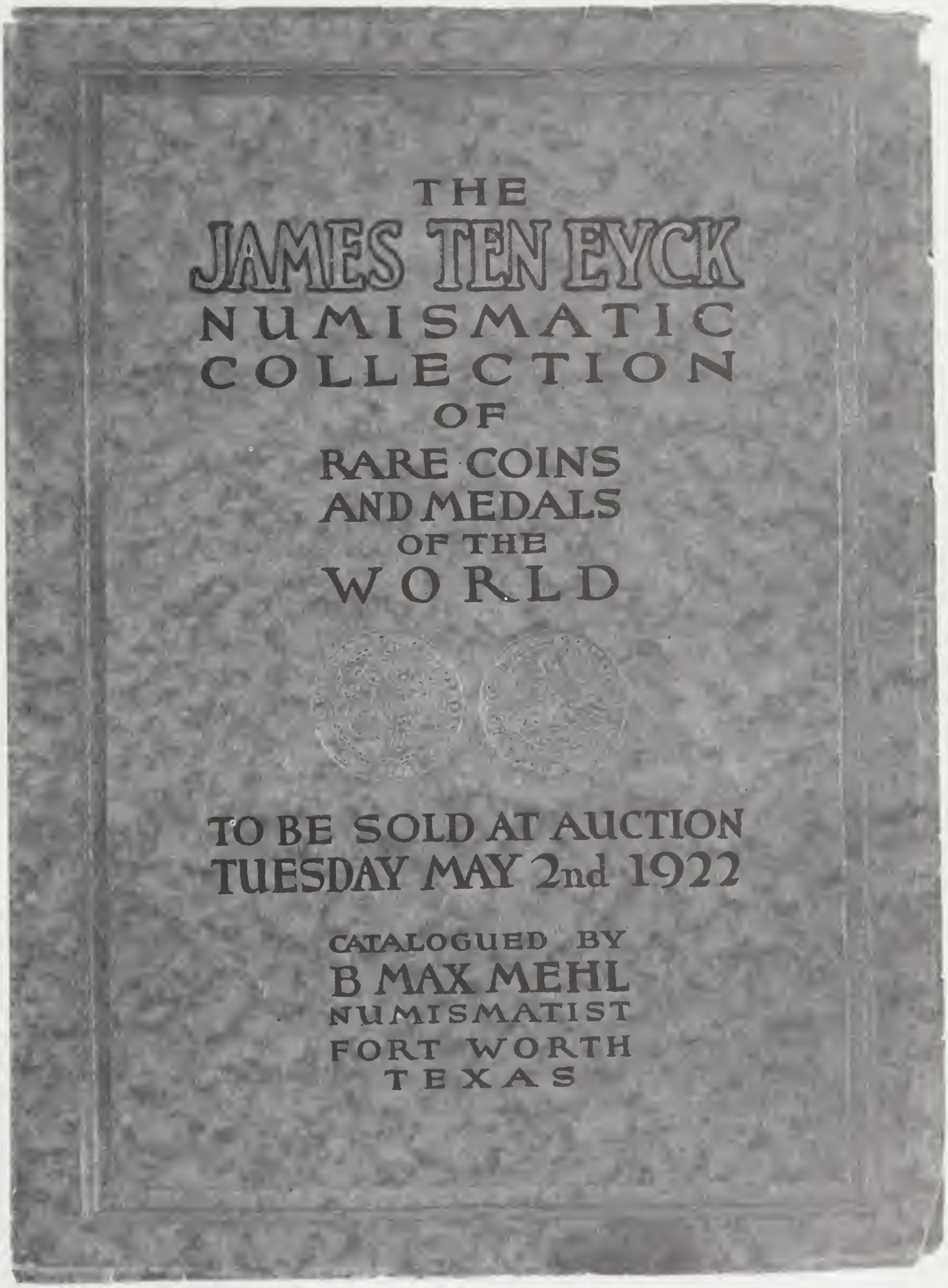
The Price List of THIS Sale only $1.00.

If not on my list, you can get the catalog by ordering Price List. Please order promptly.

B. MAX MEHL
NUMISMATIST
FORT WORTH TEXAS

Largest Numismatic Establishment in the United States.

The James Ten Eyck Collection sold by B. Max Mehl in 1922 created much attention.



Cover of the James Ten Eyck Collection catalogue issued by B. Max Mehl in 1922.

THE JAMES TEN EYCK COLLECTION

PART I

COMPRISING THE

GOLD COINAGE *of* THE UNITED STATES

This Important Series is Headed by the Famous and Great Rarity

The Brasher Doubloon!

$10.00 GOLD

1795 to 1804 complete, with both varieties of 1797 and two of 1798, one the exceedingly rare variety with six stars to right.

$5.00 GOLD

1795 to 1834 complete, excepting only the 1822, including the almost unique 1798 with small eagle; 1795 heraldic eagle; all gem specimens from 1819 to 1834 and the
1815 HALF EAGLE

$3.00 GOLD

All dates, including a proof of 1875.

$2.50 GOLD

1796 to 1834 complete. Both varieties of 1796, 1797, 1826 and 1834 with motto.

Complete Set of All Dates of Gold Dollars.

PIONEER GOLD

A good representation with two beautiful octagonal and one round $50 gold pieces; the extremely rare Baldwin $10 Liberty head type; and a fine Mormon $20; etc.

Then there is a large number of other U. S. Gold, from 1834 down—all in choice condition, with many proofs of the rarest dates.

Description by B. Max Mehl of certain gold coins in the James Ten Eyck Collection, 1922.

The Ten Eyck Sale!

MY GREATEST SUCCESS

And One of the Most Successful Coin Sales Ever Conducted in the United States.

TOTAL AMOUNT REALIZED, $45,638.42.

The Greatest Average Per Lot of Any Coin Sale Ever Held in the United States.

The highest record price ever realized for a single coin of the regular U. S. Coinage—the 1798 $5 gold with small eagle—$5,250.00! Three Colonial Copper Cents brought over $1,000.00 each!

More than 90 per cent.—nine out of ten—of those who received the Catalog have ordered the Price List of the Sale, the number of lists ordered surpassing all former records of all numismatic markets.

The Price List is printed on the same quality and size paper as the Catalog. Price for the List now is $2.00. Catalog and List, $3.00.

Largest Numismatic Establishment in the United States.

The James Ten Eyck Collection, sold by B. Max Mehl in 1922, saw several records established, including a 1798 $5 with small eagle reverse at $5,250.

identified closely with those having a technical or scholarly interest in coins and, as noted earlier, served as the mentor and inspiration for John J. Ford, Jr. and Walter H. Breen, both of whom went on to contribute vast amounts of information to the body of knowledge numismatists possess today.

In 1935 the Hewitt Brothers, Chicago printers, began publishing the *Numismatic Scrapbook Magazine.* It carried dealer advertisements, noteworthy numismatic news, and many scholarly articles. After a transfer of ownership it finally ceased publication in 1976. In its heyday, especially the quarter century from its inception to 1960, the *Numismatic Scrapbook Magazine* was the predominant American publication in the field. Its only serious competitor was *The Numismatist,* the American Numismatic Association's journal, but the latter carried fewer advertisements and current news stories.

During the decade of the 1930s several new dealers became prominent. Morton and Joseph Stack, formerly in the jewelry and coin business in West Virginia, relocated to New York and established an active dealership complete with auction sales and an over the counter facility. Abe Kosoff, whose numismatic activities dated back to 1929, formed the Numismatic Gallery in New York City, in the late thirties and joined Abner Kreisberg in 1944. During the 1940s B. Max Mehl, Stack's, and the Numismatic Gallery were predominant in the handling by auction of rare United States gold coins.

The most important event of the early 1940s was B. Max Mehl's sale of the William Forrester Dunham Collection in 1941. Earlier, in June 1940, Mehl purchased the Dunham Collection intact. To raise money he offered the 1822 half eagle and other rarities to John Work Garrett, and possibly to other numismatists. Which coins were sold and which were not may never be known, but Garrett, in declining health, declined the offer of the rare 1822 half eagle. It is known that the collection of Hard Times tokens was sold en bloc to a private numismatist and that other coins were privately distributed as well, but when the "auction" of the Dunham Collection was held, all of the pieces were faithfully listed (and subsequently appeared in a price list with the "prices realized" for each).

Dunham, who died in 1936, was a native Vermonter, having been born there in 1857. During his life he engaged in the trade of a druggist in Chicago. Around 1910 he was particularly active in the American Numismatic Association and for a time served as chairman of its board of governors. Encouraging membership in that group, he offered as prizes 1908 Matte Proof gold coins to those bringing in the most new names.

His collection, according to the prices realized list, brought over $83,000 in 1941, thus setting a record. It contained many copper, silver, and gold rarities of the United States series. Mintmark coins in the gold series were not popular during the period of Dunham's greatest collecting activity, so a perusal of the auction catalogue reveals that his collection consisted of as many different *dates* as possible, without regard to whether they were minted in San Francisco, Philadelphia, or another location.

His holding of early gold from 1795 through 1834 was virtually complete except for the 1815 half eagle. Highlighting the auction offering was the famous 1822 half eagle, which was pictured in color on the cover. Mehl devoted five pages, including a special gold foil insert, to pictures and the description of this awesome coin. At the time he noted that "My handling of the 1822 half eagle . . . for the first time in my entire numismatic career, is a source of great pride and much satisfaction to me."

The famed 1822 was the Harlan P. Smith specimen sold in 1906 to Dunham, who paid $2,165 for it. In 1941 it brought $11,575, then a world's record for a gold coin. Also included in the Dunham Collection was a complete 1875 gold Proof set, one of the most desirable sets of its era.

The following year, 1942, another monumental sale of coins took place, the sale of the John H. Clapp Collection, which included one of the finest sets of gold coins ever assembled, together with many copper and silver issues in the United States series. The collection was handled privately by Stack's and was sold to Louis E. Eliasberg, Sr., for over $100,000.

Morton M. and Joseph B. Stack were the principals of the firm bearing their name. From an early time their New York office specialized in auction sales, the first one being held in October 1935. For the next several decades many great collections were catalogued by them. During the

A Dream Come True!!

My life-long ambition and dream to catalog and successfully sell the Celebrated Dunham Collection came true!

This Catalog and Sale has been pronounced the most outstanding numismatic event in the entire history of American Numismatics!

The Sale was an even greater success than I hoped for or anticipated. **Nine hundred** bidders were represented at the Sale! New records made.

The 1804 Dollar brought $4,250.00. A new record for single silver coin. The 1822 Half Eagle brought $11,575.00, which is the highest sum ever realied for a single U. S. coin (and probably the highest in the world).

The total of the Sale will, I believe, be a new record for this country!

While all who have responded with bids or comment were personally and individually thanked by me, I want to publicly acknowledge my deep appreciation of this wonderful expression of confidence and responsiveness on the part of the American and Canadian Collectors.

The Price List is now ready. Its price is $2.00. I have just a few of the Catalogs left. Price of the Catalog and Price List is $5.00.

Special full leather bound copies, with original enlarged photographs of the 1804 Dollar, 1822 Half Eagle, and the Kellogg $50.00. Cover in gold. Your name in gold. Price $15.00.

Write me for ANY numismatic service.

Again many thanks,

B. MAX MEHL

Mehl Bldg., Fort Worth, Texas

In 1941 the William Forrester Dunham Collection, sold to mail bids by B. Max Mehl, broke many records as this July 1941 advertisement indicates. The star of the sale was the 1822 half eagle at $11,575.00. The buyer was Amon Carter of Fort Worth. Years later the coin was sold by his son to Stack's who in turn sold it to the Josiah K. Lilly Collection. Today (1982) it is in the Smithsonian Institution.

1940s Stack's achieved much recognition by selling the holdings of James W. Flanagan, J. F. Bell (Jacob Shapiro), and duplicates from the Eliasberg Collection (sold under the name of H. R. Lee). In recent years the firm passed to the sons of the founders, Harvey, Norman, and Benjamin Stack.

Stack's sale of the Col. James W. Flanagan Collection in 1944 included a fine array of gold coins. Among the half eagles the 1797 with 16 stars on the obverse and heraldic eagle reverse, considered unique today but unrecognized for its rarity at the time, was included, as were the 1798 small eagle, 1815, 1819, and other issues, making the offering nearly complete to 1834. The most famous entry in the sale catalogue was the rare 1933 double eagle which was subsequently withdrawn when the government stated, despite objections from numismatists, that it was considered illegal to own. The Flanagan sale brought over $87,000, the largest amount ever received to date for gold coins at auction.

Later in the year Stack's sold the J. F. Bell Collection of United States and territorial gold coins at auction. This superb offering was nearly complete with regard to mintmark varieties. In fact, in the back of the catalogue Stack's wrote:

> To the collectors: We are adding the following list of coins *not* contained in this catalogue so that collectors may have a complete list, and present day value, of all United States government-issued gold coins. This list of additional varieties makes the catalogue of the J. F. Bell Collection useful as a first rate reference work, as it now contains every known type.

The list contained only 17 coins, graphically illustrating that the Bell Collection, which contained 1,005 lots, was the most complete set of United States gold coins ever sold at auction up to that time. The era of collecting gold coins by mintmark varieties had finally taken hold. It was just a matter of time until many numismatists evaluated the situation and began to collect in an intense way the different varieties of Liberty head and twentieth century $5, $10, and $20 pieces, series which had been virtually neglected earlier. The Bell sale brought nearly $132,000, giving it the title of the most expensive gold coin collection sold up to that time, surpassing even the Flanagan realization.

In 1946 another remarkable offering appeared. Billed as the "World's Greatest Collection of United States Gold Coins," the pieces were the property of Frederick C. C. Boyd, owner of the Union News Company, which maintained newsstands at railroad stations throughout the United States. Boyd, who was born in New York City in 1886, began collecting coins at an early age. He went on to become one of America's most prominent numismatists. He held Life Membership No. 5 in the American Numismatic Association. Nearing retirement, he sold his coins through the Numismatic Gallery in New York City. Boyd died in 1958. His collection contained numerous Proofs, rarities, and other desirable issues. For many years Boyd had been an important factor on the coin scene, even buying and selling as a dealer from time to time.

The Numismatic Gallery formed in the late thirties, flourished in the 1940s and continued through 1954, after which time the owners, Abe Kosoff and Abner Kreisberg, each having moved to California, engaged in their own separate businesses. In the 1970s and early 1980s Abe Kosoff engaged in numismatic appraisals, the study and pricing of pattern coins (including a periodic updating of the values in Dr. J. Hewitt Judd's book on the subject, *United States Pattern, Experimental, and Trial Pieces*, a revision of the earlier Adams-Woodin book on the same subject), grading research, and related activities. Abner Kreisberg, with Jerry Cohen as his partner, operated the Coin Gallery and Quality Sales (a coin auction firm) in Beverly Hills, California.

The 1,046 gold lots at the Numismatic Gallery's 1946 auction of Boyd's "World's Greatest Collection" brought over $115,000, just a hair's breadth from the record set by the Bell Collection. The cataloguers' foreword in the Boyd offering stated that:

> Never before has there been offered so complete a listing of gold coins from the regular United States series . . . The series of gold dollars, quarter eagles, and $3 gold pieces are complete; one eagle is missing as are four double eagles and a few half eagles.

Noteworthy is the fact that the Boyd Collection was virtually complete in the mintmark issues, a rare situation for the era, the Bell Collection being a notable exception. Interestingly, the Boyd holdings did not contain the 1798 small eagle $5, nor were the 1815, 1822, 1828, 1829, or 1832 dates of the same denomination included, the rarest issues of the series.

Although no 1822 half eagle was in the sale, the cataloguers could not resist the temptation to write the following:

We are not privileged with the opportunity to offer this outstanding rarity. The 1822 half eagle was never included in this collection, but that statement can be applied to almost every great collection ever formed.

The NUMISMATIC GALLERY proudly records the private sale of the Brand specimen of the 1822 half eagle for $14,000. Up to this writing, the highest price ever paid for any individual coin, it reposes in the cabinet of one of America's outstanding collections.

Unstated was the name of the purchaser: Louis Eliasberg.

The Boyd Collection featured another fabulous rarity in the half eagle series, the 1854-S, a coin of which just 268 were minted. It is believed that this offering may have represented the first time an 1854-S half eagle was offered at auction. No earlier records have been traced by Q. David Bowers or Richard Bagg.

Concerning the 1854-S, the cataloguers wrote:

In point of rarity this item is perhaps the rarest of United States coins. As a matter of fact, only two specimens are known, and this is the better of the two. It is Extremely Fine with sharp lettering, date, and features. There is no reason why the coin should not bring more than the 1822 half eagle at the present time . . . once the auctioneer cries "sold," the coin will probably not be offered again during this generation.

The coin brought a stunning $5250 and went into the Louis Eliasberg Collection.

Nearly six months later, B. Max Mehl issued an auction catalogue featuring the William Cutler Atwater Collection. A numismatist for more than a quarter of a century, Atwater was born in 1861 in Brooklyn, New York. He became president of several oil companies and also was in the timber-and business. Probably his greatest achievement in the field of coin collecting was his acquisition of two specimens of the 1804 silver dollar, the Stickney and Idler coins. Both were sold in this celebrated sale. Not only did Atwater acquire many rarities of the copper and silver series, but his holdings included many gold issues as well. He died in 1940.

With the exception of later-dated gold coins, his collection was virtually complete. As Mehl wrote, the double eagle offering was "1850-1920, complete for all mints!" The eagles "1795-1915 complete, all dates and mints," the half eagles "1795-1916 complete (with only one exception) of all mints," the $3 pieces "complete from 1854-1889," the quarter eagles "complete for all mints 1796-1915 (with only one or two exceptions)," and gold dollars "complete collection of all dates and all branch mints."

The Atwater Collection realized over $153,000. Mehl proudly stated that this set a record for coins sold at a single auction event.

In 1947, Mehl offered the Will W. Neil Collection. Although the collection of one dollar gold pieces, quarter eagles, and $3 gold pieces was nearly complete, the collection of eagles, half eagles, and double eagles was missing many issues. The highlight in the gold series was a set of four different $4 Stella pieces of 1879 and 1880.

A few months later in October 1947, the H. R. Lee Collection, consisting of duplicates from the Louis Eliasberg Collection, was auctioned by Stack's. Eliasberg's earlier purchase of the Clapp Collection intact, together with his buying activities, resulted in many first-class duplicates being obtained. Many important gold rarities were included in the auction, which realized nearly $94,000. A complete set of gold dollars, a nearly complete set of quarter eagles, a complete set of $3 gold pieces, many rare half eagles (including 1815, 1819, and several other rare issues), and nearly complete sets of eagles and double eagles attracted wide attention.

The $3 gold collection did not include the 1870-S. The comment of the cataloguer at Stack's is interesting:

This coin [the 1870-S, not included in this sale but mentioned anyway] was advertised by a midwestern dealer at $20,000 and was purchased by us for a lesser amount and then resold to one of our clients, one of America's most outstanding collectors, who values it far in excess of $20,000.

The purchaser of this coin was Louis Eliasberg, who by that time was the first person who came to mind whenever a rarity changed hands.

Dr. Richard A. Bagg, research associate to the present writer, unearthed a curious situation with regard to Lot 1214 of the H. R. Lee offering consigned by Louis Eliasberg. The catalogue shows a photograph of the 1797 half eagle with sixteen stars on the obverse and with heraldic eagle reverse, a coin which today is considered unique (the only known example is in the Smithsonian Institution via the Lilly Collection). If indeed the coin sold was the coin pictured, apparently Mr. Eliasberg overlooked the significance of the obverse star arrangement and sold it. Today the 1797 half eagle with sixteen stars on the obverse

IMPORTANT NEWS

To Any Serious Collector of American Gold Coins

STACK'S, world renowned house of Numismatists, have the honor to present for public auction on December 7th, 8th, 9th, 1944, the famous collection of

MR. J. F. BELL, CHICAGO, ILL.

ALMOST COMPLETE U. S. GOLD SERIES FROM $1.00 TO $50.00

Those familiar with the American gold series will of course realize of what tremendous implication this terse announcement is to any collector aware of the unique chances offered through the release of such an outstanding cabinet of rarities in first-rate condition as Mr. Bell's—but those few who somehow have not been able to acquaint themselves with the big names in their series, though they manfully strove to find out—should not be left in doubt that this Auction Sale will be one of those rare events future collectors will talk about in awe, regretting that they, too, were not present at the time . . .

Mr. Bell, a real connoisseur in his field, has spared neither efforts nor expense to assemble under his roof what everybody agrees is the finest, choicest and most remarkable array of American Gold rarities; and with an eye for **perfect** condition, the **visual** beauty of his pieces, he has managed to give the world the J. F. BELL CABINET generations of collectors will dream about.

But we need not make you wait until you hold the catalogue, the likes of which you have never seen, in your hands—you need not go wholly without a word or two describing what you may expect in this compendium of the first order, a truly outstanding accomplishment in the art of cataloguing—giving the public a catalogue that is something far beyond a mere list of exquisite pieces, a veritable **Golden Book**, to be cherished and remembered.

CATALOGUE OF THIS SALE WITH PRICES
REALIZED $1.00
AFTER THE SALE $5.00
RUSH YOUR ORDER TO-DAY,
LIMITED PRINTING

Stack's

12 WEST 46th STREET NEW YORK 19, N. Y.

1944 announcement of the sale of the J. F. Bell Collection by Stack's. Featured were gold coins, including branch mint issues.

Announcement Extraordinary

The Celebrated Collection

of

COL. JAMES W. FLANAGAN

Toronto, Canada and New York, N. Y.

To Be Sold At An Unrestricted

PUBLIC AUCTION SALE

MARCH 23-24-25, 1944

Comprising About Two Thousand Lots Of

GOLD COINS OF THE WORLD

Among This Choice Collection Will be Some of the Following:

GOLD DOLLARS	QUARTER EAGLES	HALF EAGLES	EAGLES	DOUBLE EAGLES
1849 to 1889 Practically Complete	1796 to 1929 including many Rarities	1795 large eagle 1797 3 varieties 1798 small eagle 1815, 1819, 1821 and others too numerous to mention	1795 to 1932 Practically Complete	1850 to the Rare 1933

$3.00 practically complete; several Stellas, Pioneer gold, $1.00 to $50.00. many slugs, Commemorative gold, $1.00 to Panama $50.00 slug. Gold Coins of England with many 5 guinea pieces and several large gold Coronation medals; France, Germany, Balkan States, Spain, and a Large Collection of Mexico, South and Central America, with many of the great rarities from these parts.

WE EXPECT THIS SALE TO REALIZE THE WORLD'S RECORD IN TOTAL AMOUNT OF DOLLARS! PLATE CATALOGS AVAILABLE SHORTLY, LIST OF PRICES REALIZED, ONE DOLLAR. RESERVE YOUR CATALOG NOW.

Stack's

12 West 46th St., New York 19, N. Y.

Announcement for the sale of the Col. James W. Flanagan Collection, Stack's, March 1944.

and heraldic eagle reverse is recognized as a landmark rarity but this was not the case during the 1940s. Stack's comments bear repeating:

> Lot 1214. 1797 Sixteen stars variety. Perfect date. Small eagle on reverse. Uncirculated. With semi-proof surface. The Bell specimen realized $700. Very rare.

Bell did have a 1797 "perfect die with sixteen star [obverse] variety;" however, it was graded as About Uncirculated at the time. It was the heraldic eagle variety (not the relatively plentiful small eagle type) and it did realize $700. The same photograph is used in both the Lee and Bell catalogues. Lot 1214 from the Lee Collection quoted above notes the reverse is a "small eagle," which according to the photograph, it clearly is not. However, there is a $5 with sixteen obverse stars and small eagle reverse, but that variety does not fit the description and photograph of the Bell coin. Perhaps the photographs were mixed up or perhaps the Lee description was misworded.

The sale by the Numismatic Gallery of the "Memorable Collection," catalogued by Abe Kosoff and Abner Kreisberg, focused additional attention on gold coinage. Featured was a vast array of gold coins, a collection which belonged to "J. F Bell." Noteworthy among the pieces were an 1841 quarter eagle, and 1875 $3 gold piece, half eagles of 1815, 1819, and other rare dates, and many early Proof coins as well as other landmark issues.

Another landmark of the era was the publication in 1946 of the first edition (bearing the date 1947 on the cover) of *A Guide Book of United States Coins* by Richard S. Yeoman. To this point, the only periodic listing of United States issues by varieties and giving prices was Wayte Raymond's *Standard Catalogue of United States Coins*. The "Red Book," as it came to be known, served to sharply increase collector interest in all coins as the efforts of the Whitman Publishing Company secured the distribution of the red-covered volume in bookstores, hobby shops, and many other locations all over America (whereas distribution of the Wayte Raymond book was mainly limited to numismatic circles). Most gold coins were priced in two grades: Fine and Uncirculated, with the addition of Proof valuations in appropriate instances. In an era in which little numismatic research had been done concerning the market appearance of gold coin varieties in different grades, the *Guide Book* simply listed virtually every gold coin in Uncirculated grade, whether or not such actually existed. In later years the continuation of this practice was to cause consternation among advanced collectors who thought, somehow, that the existence of prices for Uncirculated coins meant that such were available. It was not until the 1970s that Don Taxay, David Akers, and Walter Breen published findings that showed in many instances that no Uncirculated specimens existed of certain varieties. The *Guide Book* went on to become one of the ten all-time best-selling books ever printed in the English language.

Activity begets more activity and the proliferation of auction sales, the advent of the *Guide Book*, and the general attention paid to gold coins, including mintmark varieties, projected the field to one of intense interest by the end of the decade. It was, of course, too late to rescue the 1854-O and 1856-O double eagles, 1854-S half eagles and other pieces which went to the melting pot in unknown quantities scarcely fifteen years earlier, but still there were many opportunities for the astute buyer. The rarity and value of gold coins from the 1795-1834 era became more rigidly defined, but still, pricing of certain mintmark varieties, particularly those dated in the late nineteenth century, was erratic, and there were many chances to acquire scarce issues for little more than the price of common ones.

In a letter to B. Max Mehl dated February 10, 1949, Louis Eliasberg wrote:

> The 1841 quarter eagle, incidentally, is the last gold coin which I had to acquire to complete the regular United States gold series.

Thus occurred one of the most important events in the history of American numismatics: For the first time, one collection contained an example of each and every date and mintmark of United States gold coinage.

Born on February 12, 1896, Louis Eliasberg completed his education, including the study of finance at the Wharton School at the University of Pennsylvania and entered the field of banking as a career. During the 1920s he became interested in coin collecting when a relative presented him with some foreign pieces which were brought home from a trip abroad. In 1926 his collecting interest blossomed, and he acquired important pieces from the leading dealers of the day. After President Roosevelt's 1933 recall of gold coins, Louis Eliasberg's interest in the field

WILLIAM CUTLER ATWATER COLLECTION
Catalogued and To Be Sold By
B. MAX MEHL

A BRIEF DESCRIPTION:

GOLD

DOLLARS: Complete of ALL MINTS, nearly all superb.

$2.50 Gold: Virtually complete in all mints. 1796 to 1834 complete. All choice. 1854-S all D Mints; 1863 brilliant proof, etc. Those from about 1859 on are brilliant proofs.

$3.00 Gold: Complete set with a proof of 1875.

$5.00 Gold: Probably the finest and most nearly complete set ever brought together. All the great rarities, excepting only the 1822. A gem 1815, 1832 with 12 stars, etc.

$10.00 Gold: Virtually complete in all mints, including the 1858 Phila. ALL early rarities.

$20.00 Gold: From 1850 to 1920 complete in all mints. Those from 1859 on are in brilliant proof!

SILVER

DOLLARS: 1794 to about 1923 complete in all mints, lacking only one or two. The early dates in superb condition, including an uncirculated 1794. BOTH varieties of the 1804, including the celebrated Stickney Dollar. Also Dollars of 1863, 1864 and 1865 WITH MOTTO.

HALF DOLLARS: 1794 to 1921 complete in gem state. Both varieties of 1796; a gem 1797; a semi-proof 1838-0, a proof 1878-S; 1846 over a horizontal 6, in semi-proof; 1863, 1864 and 1865 WITH MOTTO.

QUARTER DOLLARS: 1796 to 1921 complete, all mints. Early dates choice; later are proofs; 1823 and 1827.

DIMES and HALF DIMES: Virtually complete in all mints. The early dates nearly all uncirculated. The later dates proofs. A proof 1846 Dime and Half Dime; and the famous Wilson 1802 Half Dime, supposed to be the finest known. (Brought over $700.00 nearly 40 years ago).

COPPER

CENTS: What a collection! Nearly all uncirculated! 1793 includes a mint red wreath type, and the finest known Liberty Cap type, uncirculated. Choice 1799, both varieties; 1821 and two of 1823 uncirculated!

HALF CENTS: Includes a semi-proof 1796, no pole. A fine 1796 with pole. All rarities of the 30's and 40's.

I have tried to throttle down my enthusiasm and use few if any superlatives, but I cannot resist the temptation at least to say, Boy, What a Collection! And when you see the CATALOGUE, I am confident you will echo my enthusiasm.

I am not begging you to get this Catalogue. I am here only suggesting that if you want this Catalogue (and what human being wit hthe slightest infection of the Numismatic Spirit doesn't want it?) you had better write right now for your free copy of the truly beautiful booklet describing a truly Great Sale.

B. MAX MEHL, Numismatist

Mehl Building **Fort Worth, Texas**

The William Cutler Atwater Collection, sold by B. Max Mehl in 1946, offered many important gold issues. The offering of half eagles in particular was unusually complete.

What a Sale!

We are talking about the famous

LEE COLLECTION

Which will be sold at public auction on

OCTOBER 2, 3 and 4, 1947

If you are interested in RARITIES, look over this array:

—1894-S DIME—

$1 GOLD: 1855-D—1856-D—1860-D—1861-D

$2.50 GOLD: 1797—1834 Motto—1863—1875

$3 GOLD: 1873—1875—1876—1877

$5 GOLD: 1797 (3 var.)—1815—1819—1828—1832—1909-O—1929

$10 GOLD: 1798 (6 stars)—1804—1875—1909-O—1933

$20 GOLD: Virtually complete, including all the rare proofs in the '80s

If your wants are an 1856 Flying Eagle Cent or an 1877 Nickel, as well as any great rarities in Pioneer or foreign gold, they'll all be there; so, just sit down and write us to reserve a catalogue of this famous collection for you—and if you send along $1.00, the prices realized are yours after the sale at no additional cost.

Stack's

12 WEST 46th STREET NEW YORK 19, N. Y.

1947 announcement of the "Lee Collection," sold by Stack's. The offering featured duplicates owned by Louis Eliasberg.

"Home of America's *Finest Coin Sales"*

Estimated to exceed $156,000.00

A memorable collection of

UNITED STATES

and

TERRITORIAL GOLD COINS

is to be sold at

PUBLIC AUCTION

at the

BEVERLY-WILSHIRE HOTEL

in Beverly Hills, California

on

Monday and Tuesday
March 1 and 2, 1948
at 8:00 p.m. each day

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CATALOGUE 43-44 NOW READY

NUMISMATIC GALLERY

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BEVERLY HILLS, CALIFORNIA

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Beverly Hills

42 EAST 50TH STREET
NEW YORK 22, NEW YORK

Cable: Numgallery,
New York

The offering which became known as the "Memorable Collection" (property of J. F. Bell) was the subject of this 1948 advertisement by the Numismatic Gallery. Featured were many important United States and territorial gold issues.

Home of America's NUMISMATIC GALLERY 1937 *Finest Coin Sales*

THE OUTSTANDING AUCTION SALE *of the* YEAR

will be held on

June 15th, 16th and 17th

in

BEVERLY HILLS, CALIFORNIA

The Adolphe Menjou Catalogue will offer thousands of lots and will feature: 1802 half-dime, 1873-CC dime, 1894-S dime, 1876-CC 20c, 1823 and both 1827 quarters, 1796 and 97 halves, as well as the 1838-O; 1884 and 1885 trade dollars, the 1870-S silver dollar. An 1841 $2.50 gold as well as 1863 and 1854-S, the extremely rare 1879 Quintuple Stella, the rare double eagles, 1883, 1884, 1924-S, 1926-D, etc., the 1858 eagle, the 1875 $3 piece, the half eagles of 1815, 1819, 1821 to 1834—plus the run of all denominations of U.S. coins; Panama Pacific sets, commemoratives, and a magnificent collection of 260 pieces of California Gold.

The greatest PUBLIC AUCTION SALE OF ALL TIME.

Catalogues now available to purchasers of the list of Prices Realized at $1.00. Extra Catalogues—$2.00 each.

NUMISMATIC GALLERY

A. KOSOFF — ABNER KREISBERG

8943 WILSHIRE BOULEVARD — BEVERLY HILLS, CALIFORNIA

BRadshaw 2-5833 Cable: NUMGALLERY

Advertisement for the 1950 auction of the Adolphe Menjou Collection sale.

harpened, and by a decade later his collection of gold and other United States coins ranked as one of the most important ever formed. The foundation of its holdings, and the impetus for desiring absolute completion, was furnished by his purchase in 1942 of the Clapp Collection. As noted earlier, he aggressively bought rarity after rarity as they came up on the auction block, completing his task in 1949 with the acquisition of a Proof 1841 quarter eagle. By that time the 1822 half eagle, 1870-S $3 gold, and all other dates and mintmarks in the United States series were his.

On November 7, 1950, Louis Eliasberg's collection of other issues became complete when he acquired the unique 1873 Carson City Mint dime without arrows at the date. Never before in numismatic history had any collector accomplished such a feat. Exhibited in several locations over the next quarter century, the Eliasberg Collection drew many press notices. *Life* magazine, which did a full-color spread about it, designated the achievement as "the greatest collection of United States coins." *Look* noted that "he holds a specimen of every United States coin ever minted, a feat that crowns him king of collectors," while *Time* noted that "the only complete collection of United States coins belongs to Louis Eliasberg who keeps it in the safe deposit vault." The *Guinness Book of World Records* noted that the Eliasberg Collection was the only complete group of United States coins ever formed and included the unique 1870-S $3 issue.

When the Eliasberg Collection was shown at the Smithsonian Institution, from May 1, 1960 until August 31st of the same year, a period of only four months, over 1,500,000 people saw the coins, a remarkable testimony to the appeal rare coins have to the public and to the unique Eliasberg accomplishment. It is doubtful if any other coin exhibit before or since has attracted so many visitors within a short span of time. In later years he kept aware of market trends and from time to time penned his observations to various dealers and collectors. In 1972, after having been told by Hans M. F. Schulman that the coming years of 1973 and 1974 would see top prices for coins, he wrote:

> It is my opinion that the more large collections that are broken up, the greater the value of the remaining large collections that are intact.

Among the highlights of the present writer's life were several visits with Mr. Eliasberg including a week-long study of his collection in 1975.

On February 20, 1976, 80 years and 8 days after he was born, Louis Eliasberg died. A trusting and caring man, he declined to discuss the value of his collections on many occasions during his life and simply said that his coins were priceless, like his wife and children, and further, that his coin collection was also "priceless and personal satisfaction." His coins went on exhibit at the Philadelphia Mint during the bicentennial year. Innumerable citizens thronged to see the pieces which had given him so much personal satisfaction during his lifetime.

The period of the 1950s did not see the dispersal of as many great gold collections as did the decade earlier. Most of those sold during the 1940s — Boyd, Dunham, Atwater, as examples — were formed much earlier. Now in the 1950s, a new generation of gold coin collectors came into prominence, and the new generation desired not only dates, but mintmarks as well.

In 1950 the Numismatic Gallery sold the collection of movie personality Adolphe Menjou at auction. Menjou owned a vast array of gold coins including a complete set of one-dollar pieces, quarter eagles, and three-dollar issues. Many rare half eagles were offered in the event, with the highlight being an 1815. The collections of eagles and double eagles were nearly complete and included mintmarks.

The most significant numismatic event of the period was the auction of the collection of King Farouk held in Cairo, Egypt in February 1954.

Farouk, born in Cairo in 1920, received his education there and in England. In 1936 his father died and young Farouk ascended to the throne. According to Abe Kosoff, who sold Farouk many coins, at age 26 the king was "obese, obsessed with sex, and reckless at the gambling table." Not only was Farouk interested in numismatics, he also collected stamps, jewels, paintings, silver, objects of art, musical instruments, watches, and other items. His collection of pornography formed a special delight, it was said.

Over the years Farouk acquired approximately 8,500 coins. Many of his pieces were badly handled by being roughly and carelessly cleaned and then lacquered. However, most of the mistreat-

ment fell to the copper coins, which Farouk, in a misguided manner, felt should be "bright." Many pieces with attractive brown toning were cleaned to a bright orange hue. Fortunately, the gold coins fared better for they were "bright" to begin with!

In 1952 a military coup forced Farouk to abdicate the throne, after which he went to live in Italy in exile. The new government took the position that the coin collection and other properties had been paid for with money belonging to the people of Egypt. Indeed, this was true, for dealers who sold to Farouk during the period of his main collecting activity in the 1940s have related to the author that for amounts in excess of $10,000 Farouk required clearance from the government treasurer before issuing payment. So, he developed the devious expedient of asking a coin dealer who had a bill of, say, $35,000, to break it down into a series of invoices, no one of which would exceed the $10,000 figure.

The sale catalogue was prepared by A. H. Baldwin and Sons, of London, and Sotheby was the auctioneer. Virtually a complete collection of United States gold coins, missing only certain important rarities, was offered in blocks, sometimes numbering over a dozen rarities per lot! While such an offering perplexed knowledgeable numismatists and caused them to scratch their heads in bewilderment (for example, the rare 1913 Liberty head nickel was included in a lot containing dozens of other nickels!), it turned out to be a fantastic buying opportunity for dealers who made the journey to Cairo to attend in person. The catalogue descriptions were such that it was virtually impossible to bid with authority by mail.

After the auction many United States rarities were repatriated, and today Farouk's gold issues are now part of many different collections.

The Davis-Graves Sale sold by Stack's in 1954 attracted wide attention. George L. Davis, born in Lawrence, Massachusetts in 1828, began collecting coins around 1870. He purchased many colonial, copper, and silver coins from various dealers, especially from John W. Haseltine of Philadelphia. After his death in 1890 the coins were kept in a safe deposit box until 1953 when the heirs decided to auction them. These coins were combined with the Henry P. Graves Collection, which contained many gold issues, and the resultant combination crossed the auction block in April 1954. Included were many excellent gold issues from dollars through eagles.

Another sale which offered an impressive array of United States gold coins was conducted by Stack's in 1955, the Farish-Baldenhofer Collection. Nearly a complete run of gold coins was offered, highlighted by an 1875 $3 piece and many rare half eagles, including the unique 1797 with sixteen star obverse and heraldic eagle reverse (offered for the fourth or fifth time by the same firm in eleven years, and eventually sold to Josiah K. Lilly). The 1798 small eagle $5, 1815 $5, and a Proof 1804 $10 caused great bidding interest.

The next sale of importance containing United States gold coins was held by Abe Kosoff in April 1956. The coins, which featured the name of Melish, were apparently gathered by numismatists other than him. The group was highlighted by a fabulous collection of half eagles. It was not complete by any means, but what the offering lacked in rare varieties was compensated by other dates in depth. For example, there were 13 examples of the 1795 half eagle, 11 1798s, six 1799s, and so on.

Melish, born in 1877, was a native of Cincinnati, Ohio. An entrepreneur at heart, he was responsible for distributing the Cincinnati and Cleveland half dollars, the former in a manner which aroused resentment among many potential buyers (a set of three half dollars from the different mints was offered at $7.75, but many orders were returned marked "sold out"; soon thereafter, sets were "available" from dealers in the $50 range!). At one time he was chairman of the board of governors of the American Numismatic Association. His death came in 1948.

Another fabulous sale of gold coins took place in June 1957 and was held by the New Netherlands Coin Company, operated in New York City by Charles M. Wormser and John J. Ford, Jr. Featured were duplicates from the Louis Eliasberg Collection. Cataloguing was done in a particularly appealing and scholarly manner by Ford, who during this time elevated the level of the firm's auction presentations to one widely admired by historians and scholars. In addition to giving basic information such as date, mintmark, and condition, Ford devoted extensive space to striking procedures, minting peculiarities, the rarity of specimens and their availability in past auctions,

d the like. The quality of the duplicates offered s excellent, and many went into first-line col-tions of others.

A serious numismatist of the time would pically belong to the American Numismatic As-ciation and receive *The Numismatist* each month. *e Numismatic Scrapbook Magazine,* published in icago, also a monthly, would be scanned when ch issue arrived, for pages were literally ammed with fixed price offerings and auction e announcements. Coming up strong was other contender, *Numismatic News,* founded in 52 by Chet Krause, of Iola, Wisconsin, who er went on to form a publishing empire with ecialized magazines and newspapers in the col-cting field.

In 1960 a new publishing entry appeared on e scene: *Coin World,* which set a new standard r frequency — weekly issuance. Soon, *Numis-atic News* would change from bimonthly to eekly publication. Now, the latest news, prices, d events in the numismatic world were cir-lated within a week or two after they actually ppened. Quickening the pace still further was e advent of the Teletype. Beginning in the early 960s, dealers all over America, especially those volved in trading volatile issues such as silver llars, gold coins, rolls, Proof sets, and the like, ere linked by instant electronic communication.

The Professional Numismatists Guild, founded 1955, grew to become the leading organization r rare coin dealers. Members agreed to conduct usiness by a rigid code of ethics, thus giving new otection to coin buyers in matters involving ading, authenticity, and other areas. Later, the ofessional Numismatists Guild introduced its rtificate of registration, whereby for a small fee person buying a coin from a member of the uild could have its characteristics, including in me instances a photograph, recorded per-anently, an especially useful situation should eft or loss occur.

Conventions, formerly held on widely spaced ates on the calendar, became increasingly fre-uent during the 1960s. By the middle of the ecade a typical weekend would see several con-entions, mostly of a local or regional nature, go-g on in various parts of the country. The annual et-togethers of the American Numismatic Asso-ation, usually held in August, attracted more eople than ever before. Whereas an attendance of five hundred broke all records at the 1955 Omaha show, by ten years later many thousands came to each one. The Central States, Middle Atlantic, New England, California, Penn-Ohio, Florida, and other numismatic associations reported record attendance each time a show was held. When Michael Kolman, Jr., proprietor of the Federal Coin Exchange in Cleveland, announced he was gathering consignments for a "million-dollar auction" to be held in Florida, many of his contemporaries in the trade expressed disbelief that a sale could be that large. However, it wasn't too far distant, in the late 1970s, that several *multi-* million dollar sales took place.

In October 1962 Stack's auctioned the collection of Samuel W. Wolfson. Wolfson, born in Baltimore in 1912, later moved to Florida where he spent the rest of his life. For many years he was involved in the shipbuilding trade.

Numbering 1,044 lots, his collection of United States gold coins was nearly complete. When the hammer came down on the last coin, over $535,000 was realized, a new record for a public sale of American gold issues. Rarities were numerous, with the highlights of the sale being the 1875 $3 Proof at $17,000, the 1854-S half eagle at $16,500, and the 1841 quarter eagle at $15,000.

The event represented only the second time that the 1854-S had been offered at public auction, the previous one appearing in Boyd's "World's Greatest Collection" in 1946.

Another important offering of gold was the collection of J. F. Bell sold by Rarcoa. Bell, a Chicago financier who had sold his earlier collection of gold coins through Stack's in 1944, assembled another fantastic group which comprised 975 lots, another milestone.

As *Coin World* and *Numismatic News* increased their subscription rolls, other publications gained shares of the market. The *Whitman Numismatic Journal,* published from 1964 to 1968, carried a wide variety of scholarly articles and dealer advertisements and was prepared under the direction of Kenneth E. Bressett, who subsequently succeeded Richard S. Yeoman as editor of the popular *Guide Book.* As the Whitman Publishing Company, a division of Western Publishing of Racine, Wisconsin, achieved great success with the *Guide Book of United States Coins* and the *Handbook of*

United States Coins (the latter giving wholesale buying prices), the firm spread its line to include many other coin books on a wide variety of topics. Some of these were of specialized interest, such as *The Fantastic 1804 Dollar*, by Eric P. Newman and Kenneth E. Bressett, and others were of a more general nature, such as a priced volume covering the field of world coins.

The Coin Dealer Newsletter made its debut in the active markets of the 1960s. With "bid" and "ask" columns for various coins, particularly rolls, Proof sets, and later issues, it set the stage for investor interest which likened the columns to those found in the stock market. Using information obtained from Teletype transactions and dealer surveys, *The Coin Dealer Newsletter* became the source of price information most relied upon by active dealers and collectors, particularly those involved in volatile series.

In 1964 the first in his series of monographs of United States gold coins was produced by Walter H. Breen and was published by Hewitt Brothers in Chicago. Never before had a study of the different United States gold denominations been undertaken with such completeness and determination. Intended to be a study of the major varieties of gold dollars, quarter eagles, $3 gold pieces, half eagles, and eagles, the several monographs in the series included much unpublished information, a listing of the location of great rarities, and many anecdotes and stories involving collectors and dealers. The slim yet meaty publications told of mint history, die preparation, vagaries of mint operations, and many other facts and assumptions, and served as a building block for further research conducted by the same author as well as others.

As B. Max Mehl could have told his contemporaries years later, dealers realized that a coin could be more effectively presented if data in addition to the date, mintmark, and condition were given. Several numismatic firms changed their emphasis from merchandising to scholarship, delivering an appealing combination of both.

In the introduction to his monograph on gold dollars, Walter Breen stated that

> the main reason for giving even the presently admitted incomplete listing is to stimulate interested collectors to provide additional information and to submit for examination coins different from those described here, for a more detailed study to be published in book form.

In a later monograph Breen clearly states that interest of collectors in the various gold series was aroused by his efforts:

> When I first attempted to list die varieties of gold, I thought the subject would be pure caviar, interesting at most to a dozen or fifteen readers, and stimulating little or no additional research on their part. The results have been far otherwise. A surprising amount of correspondence has come my way from collectors interested in the various series (half eagles most of all), including descriptions of new varieties and new die states owned by them, and examinations of some extremely rare coins have been followed.

By reviewing data in the National Archives and other sources, including mint production figures, correspondence of those involved in the mints, and so on, Walter Breen was able to bring to light much hitherto unpublished information. Robert W. Julian likewise published many valuable facts, but in more ephemeral form as part of articles appearing in *The Numismatic Scrapbook Magazine*.

The last great sale of United States gold coins to take place in the decade of the 1960s was that of R. L. Miles, Jr., a collection sold by Stack's in 1968. Miles, born in Norfolk, Virginia in 1908, was actively engaged in the world's largest oyster growing and packing firm, a business conducted with his father and brother. Miles collected coins for over three decades and formed an especially nice holding. It was his goal to complete the United States gold series in Uncirculated condition; however, in practice he found the task to be impossible. His collection was still noteworthy and contained many important rarities with the 1875 Proof $3 piece highlighting his sale at $25,000.

No review of gold coin activities during the 1960s would be complete without a discussion of the fabulous collection assembled by Josiah K. Lilly II, a director of the Indianapolis, Indiana pharmaceutical company bearing his name. A collector at heart, Lilly built a museum, which he designated as his "playhouse," on his estate. With fervent zeal and a seemingly unlimited budget, he sought to acquire a superb collection of stamps, antique military items, paintings, precious stones, rare books, and memorabilia of the sea. Coins formed a special interest but his involvement was kept a secret from the collecting fraternity. Unlike many other numismatists who took part in American Numismatic Association activities, attended conventions, or were familiar figures at

coin shows and auctions and the like, Lilly's name was never connected to the hobby during his lifetime. Only after his death on May 5, 1966, was it revealed that during the 1950s and 1960s he spent a fortune buying gold coins. Toward the end of his life, when he was in ill health due to diabetes, Lilly spent upwards of twelve hours a day at his private museum studying and enjoying his collections.

As knowledge of the estate became known, numismatists gradually learned the dimensions of the Lilly holdings. Abe Kosoff and Hans M. Schulman were engaged to appraise the coins which had largely been gathered through the efforts of Stack's, who were careful to preserve Lilly's anonymity. "I have never seen anything like the Lilly Collection in all my experience," Kosoff stated.

An effort to preserve the Lilly Collection for posterity was mounted, and Congress was persuaded to pass special legislation whereby the coins were given to the Smithsonian Institution for a tax credit to the estate of $5,532,208. A description of the eventual exhibit which resulted appeared in an article by Herman Schaden in the November 1970 issue of *Smithsonian Magazine*. It was stated that there were 1,227 different United States gold pieces, 1,225 Latin American coins, 3,227 European coins, 240 Asian, African, and Indian pieces, and about 200 ancient issues, all gold. Among the United States and related pieces were to be found an example of the 1822 half eagle (the specimen formerly in B. Max Mehl's 1941 sale of the Dunham Collection, from whence it went to Amon Carter, then to Lilly), and 153 pioneer and territorial pieces. The great American rarities were nearly all there (the unique 1870-S $3 was, of course, absent for it was part of the Louis Eliasberg Collection), including the 1841 quarter eagle, 1875 $3, the 1879 and 1880 $4 stellas, and other landmarks.

When the treasure trove arrived at the Smithsonian, the event was the subject of a feature article in *Coin World*, here reprinted through the courtesy of Margo Russell, editor:

SMITHSONIAN NOTES ARRIVAL OF LILLY COINS.

The famous Josiah K. Lilly Collection of gold coins was delivered safely to the Smithsonian Institution in Washington, D. C., on June 13th. The collection was transported under top security conditions from a bank vault in Indianapolis, Indiana, where it had been stored. Vladimir Clain-Stefanelli, curator of numismatics, signed a preliminary receipt for the collection upon its arrival.

In 24 hours, with the assistance of professional numismatist Hans M. F. Schulman of New York City, Stefanelli had checked out the entire collection. In a telephoned report to *Coin World* he expressed his "complete delight" that the transfer of this important addition to the National Collection had finally been effected.

The Josiah K. Lilly Collection upgrades the National Numismatic Collection at a point where it is one of the world's finest. Its transfer, made possible by an act of Congress, originally was blocked by Internal Revenue Service agents, who wanted clarification on the appraised value set on the collection by Schulman and A. Kosoff.

If the matter had not been resolved, the Lilly estate would have been sold at auction, and it would have been lost to the nation as a unit probably for all time.

Stefanelli said plans were initiated at once to place the collection on public exhibit. He noted, however, that many problems are involved in the preparation of display art, the construction of cases, and the preparation of adequate security measures. Despite these requirements, he expressed the opinion that America's numismatists would be able to view the exhibit at the Smithsonian Institution within a few months.

With the coins now safely in the hands of the Smithsonian Institution, Paul E. Rawley, vice president and senior trust officer of the Merchants National Bank & Trust Co. of Indianapolis, Indiana, was able to reveal for the first time the extent of the security maintained by the bank while the coins were in its custody.

As executor of the Lilly estate, the bank removed the coins from Mr. Lilly's vault and placed them in an unused bank vault in one of its 29 branches. Only four persons in the entire Merchants National organization knew in which of these branches the coins were actually stored.

The collection, Rawley revealed, had never been insured by Lilly. The bank, however, took immediate steps to find an insurance carrier who would accept the risk. The Employers Liability Insurance Co. proved cooperative in this respect, providing temporary coverage until such time as a representative of Stack's could supply a complete inventory of the more than 6,100 coins in the collection.

For purposes of security the bank found it necessary to refuse the request of even qualified numismatists to study any of the pieces in the collection, Rawley said. Therefore, for all practical purposes, little more than a handful of persons have seen the collection since Mr. Lilly began assembling it: Harvey Stack, who worked closely with the numismatists; V. Clain-Stefanelli; Hans Schulman; and A. Kosoff, who appraised the collection; and Rawley. This will make the public exhibition by the Smithsonian Institution especially significant.

Part of the numismatic collection and library of Josiah K. Lilly, Indianapolis, Indiana, as shown in a photograph from the early 1960s. The Lilly Collection, composed nearly entirely of gold coins, was donated to the Smithsonian Institution following the owner's death.

Following the death of pharmaceutical executive Josiah K. Lilly on May 5, 1966, executors of his estate made a special arrangement whereby in exchange for a tax credit to the estate of $5,532,208 his collection of gold coins would be donated to the Smithsonian Institution. The above photograph shows the arrival of many cartons containing the coins, with Dr. Vladimir Clain-Stefanelli (fourth from left), curator of the Numismatic Division, signing receipts for it. (Courtesy of Margo Russell, "Coin World")

Responsibility for the transportation of the collection was placed in the hands of Brink's. After the coins had been personally packed in 54 boxes and sealed in 18 cartons by Rawley, they were turned over to the carrier, and rushed by armored car to the Indianapolis airport, where they were loaded on the same plane that carried Rawley, attorney John G. Rauch, Jr., and a Brink's courier to Washington — after all passengers for the flight had boarded the plane . . .

The airplane was met in Washington by an armored truck and arrived at the Smithsonian Institution a bare 10 minutes after Rawley and Rauch had completed their taxi trip to Stefanelli's office. Work on checking the shipment was begun at once . . .

Paul E. Rawley told *Coin World* that the Merchants National Bank & Trust Co. of Indianapolis was happy to be a part of the historic transition.

"I know I speak for Mr. Lilly's family, his brother, and his children and the company, that they are tremendously proud of the fact that his collection is at the Smithsonian Institution's Division of Numismatics . . ."

Dr. Vladimir Clain-Stefanelli, assisted by his wife Elvira, utilized the Lilly coins to mount a spectacular exhibit. Today, selections from the group are on view for all to see and admire.

For the National Coin Collection, the acquisition of the Lilly pieces was especially significant, for certain areas of gold coins were woefully incomplete so far as branch mint varieties were concerned. Following the acquisition, the Smithsonian possessed two of the three known 1822 half eagles, with the Eliasberg Collection retaining the third example. Although no detailed inventory of dates, mintmarks, and grades of gold coins presently in the Mint Collection has been published in recent decades, it is believed that all date and mintmark issues are represented among American gold coins with the exception of the 1870-S $3 piece.

A comparison of the American gold coins in the Lilly and Eliasberg collections is revealed by a letter sent from Abe Kosoff, one of the appraisers, to Paul A. Rawley, trustee of the Lilly estate:

There is no doubt in this appraiser's mind that the Lilly Collection of United States, pioneer and territorial gold coins and ingots is the outstanding collection of its kind.

There is only one private collection of United States coins which is comparable to that section of the Lilly Collection. The Eliasberg Collection, in fact, includes the $3 piece of 1870 minted in San Francisco. This coin which is unique is, therefore, lacking in the Lilly Collection. However, the unique 1797 half eagle with the 16 star obverse and the large eagle reverse is in the Lilly Collection and in no other.

The decade of the 1960s saw Empire Coin Co., formed in 1958 by Q. David Bowers and James F. Ruddy, expand to become one of the country's most prominent numismatic firms. In 1961 it was announced that over one million dollars worth of sales to collectors had been accomplished in a single year, a figure unequalled in the rare coin field. Handled during the period were many important gold coins, ranging from an extremely high relief MCMVII $20 acquired by the firm from Yale University to an 1841 quarter eagle purchased from an Upstate New York seller who had it in the family for many years and was not aware of its worth. In one of those dream-comes-true situations, a check for several thousand dollars was given to the surprised and delighted holder. The pattern collection of Major Lenox R. Lohr, containing well over 1,000 different coins, attracted wide attention when the firm offered it for sale. In 1965 Empire Coin Co., together with the private business of James F. Kelly, merged to form Paramount International Coin Corp. of Englewood, Ohio. Later, Bowers and Ruddy Galleries was formed by two numismatists who left the firm.

While auctions made headlines, many private collections were being quietly formed during the period. In Texas, John Murrell, a petroleum geologist, gathered a beautiful collection of gold rarities, assisted by John N. Rowe III, John J. Ford, Jr., and others. In the same state, Harry Bass, assisted by Mike Brownlee, began the formation of what was to become an incredible gold coin collection. Like certain other numismatists of the past, Harry Bass became an avid student in the field and soon was knowledgeable concerning die varieties, minting methods, striking variations, and the like. In the 1970s he was named president of the American Numismatic Society in New York, a signal honor.

In Ohio, Hon. and Mrs. R. Henry Norweb continued the formation of one of the finest private American coin cabinets, including in their holdings many superb gold coins. A decade later, the numismatic community was impressed by several important gifts given by the Norwebs, including a 1913 Liberty head nickel to the Smithsonian Institution (which lacked a specimen of this rarity) and a 1787 Brasher Doubloon to the American Numismatic Society.

The 1970s saw remarkable changes in the government's gold regulations, a situation which aused investors en masse to enter the United tates gold coin collecting arena.

In 1933-1934, years earlier, many changes took lace with regard to holding gold coins, a situaion explained in detail earlier in the present text. However, another fact was that any gold coins which were not turned into the Treasury during his period became collector's items and increased n value. All gold coins jumped sharply in value s gold was adjusted upward from $20 to $35 per unce by government decree.

In 1971 President Richard Nixon severed the elationship between the dollar and gold bullion, situation which had come under great strain. For he first time in many years, the value of gold was llowed to freely float in the marketplace. No oreign government could, after that point, conert American paper dollars into gold by claiming art of the Treasury gold reserves.

In view of the public interest created and the world-wide demand, the price of gold began to scalate. This sudden change in the government's osition had profound and dramatic effects on the United States series of gold coins in particular and he United States coin market in general. Important restrictions were eased. No longer was it necessary to fill out large amounts of paperwork nd to provide documentation of a numismatic eason to import double eagles, eagles, and other old coins from Switzerland, France, and elsewhere.

The overall effect was an increase in the umber of collectors of gold coins, not to verlook those who joined the field for investnent or speculation. Gold bullion rose from $35 n ounce to nearly $200 an ounce by late 1974.

In February 1973, when gold had reached neary $100 per ounce, a great interest in gold coin inestment pervaded the marketplace. Many firms ointed out in advertisements and brochures that olding gold was an ideal way to outpace inflaion. Hard assets were viewed as a better place han banks to keep money in times of deteriorating economic conditions.

At the same time, general conditions of prosperity, plus inflation over the years, made it possile for more and more people to afford gold oins. Decades earlier, collecting gold coins was imited just to the wealthy as were indeed such luxuries as fancy automobiles, trips to Europe, and the like. By the early 1970s many average citizens could afford such expenditures. No longer did one have to be a corporate executive or have a moneyed position to afford a Cadillac or Lincoln automobile, a motor home, or a summer visiting the sights of Europe. While collecting gold rarities still remained within the domain of the wealthy, thousands of citizens became interested in assembling gold coins in other forms such as a type set of Liberty head or Indian issues of the late nineteenth and twentieth centuries, a date set of Indian quarter eagles 1908-1929, and other possibilities.

The public discovered that gold coins were immensely "appealing." Shortly after the regulations were eased, a Troy, Ohio antiques collector visited Leon Hendrickson, a Winchester, Indiana dealer, and was delighted to find that for just $67.50 a Brilliant Uncirculated double eagle could be purchased. "Why didn't I discover these before?," he asked. A few years later a UCLA graduate student, accompanying her numismatically inclined boyfriend to a coin convention held in the Statler Hilton Hotel in Los Angeles, was amazed to find that an Uncirculated double eagle cost just $300. After admiring it, lifting and feeling its weight, noting its age (it was dated 1924), and contemplating the situation for a few minutes, she wrote out a check and became its owner. Coin by coin, person by person, interest in gold spread.

In February 1973 Superior Galleries put the gold coin collection of C. Gilhousen on the auction block. The offering was truly remarkable as it contained a complete set of gold dollars, was missing only five quarter eagles, lacked just one $3 gold piece, had many half eagles, contained a full set of eagles, and was missing only seven double eagles. The auction was truly in the right place at the right time. In terms of pre-sale estimates the prices realized were absolutely fantastic. An 1879 flowing hair $4 stella estimated at $6,000 fetched $12,500. A 1795 heraldic reverse $5 brought $13,000, doubling its estimate. In the double eagle series an 1854-O estimated at $2,750 brought $12,000, while an 1870-CC valued at $8,000 in the catalogue crossed the block at $20,000. As is usually the case with great auction sales, the 1973 prices, as high as they were at the time, proved to be great bargains later in the decade.

In May 1974 Stack's sold the Theodore Ullmer Collection of gold coins at auction. At the time, the Senate was working on an amendment that would allow United States citizens to own bullion-type gold within a year. In addition to being able to freely own gold coins, the public could also hold gold in bulk quantities. Many investors in particular felt that this would even further increase interest in the precious yellow metal. At the time of the Ullmer Sale gold was trading around $160 per ounce, approximately 60 percent more than the price during the Gilhousen Sale a year earlier.

At the Ullmer Sale numerous record prices were realized. An 1863 Proof quarter eagle fetched $50,000, far more than the identical specimen sold for in the Miles Sale in 1968 when it changed hands at $4,400. The 1875 $3 Proof fetched $150,000. Seven years earlier in the Jay Collection Sale the same coin brought $20,000. The 1798/7 $10, with six stars facing the eagle, fetched $52,000, far more than the $8,200 the same coin brought in the Miles Sale. The Miles specimen of the 1884 Proof double eagle, which sold for $8,400 earlier, fetched $110,000 in the Ullmer offering. The highlight of the auction proved to be an MCMVII (1907) extremely high relief Proof double eagle which sold for $200,000, a record price for a United States gold coin. The auction, which contained only 676 lots, brought a whopping $2.4 million, a record at the time.

In August 1974 President Ford signed legislation to permit United States citizens to once again own bars and bulk quantities of gold, thus lifting a 40-year ban. The legislation was to take effect on December 31st of the same year.

With gold still trading around the $160 level, the Rio Rancho Estate Sale was held by Superior Galleries in October 1974. The highlight proved to be an 1879 coiled hair Proof $4 which sold for $105,000. Investors and speculators in particular were forcing the price of United States gold coins to unheard-of levels in anticipation of the rise in bullion values sure to occur once Americans could legally hold gold on an unrestricted basis. Even stock brokerage firms began to announce plans to trade in gold. The present author repeatedly warned collectors against unwise speculation, believing that gold prices would drop early in 1975, but the warning was a solo one, for most thought otherwise. In late December 1974 gold reached nearly $200 an ounce. Early in 1975 bullion prices dropped sharply. Affected were the prices of many gold coins as well, although rarities were less involved than common issues.

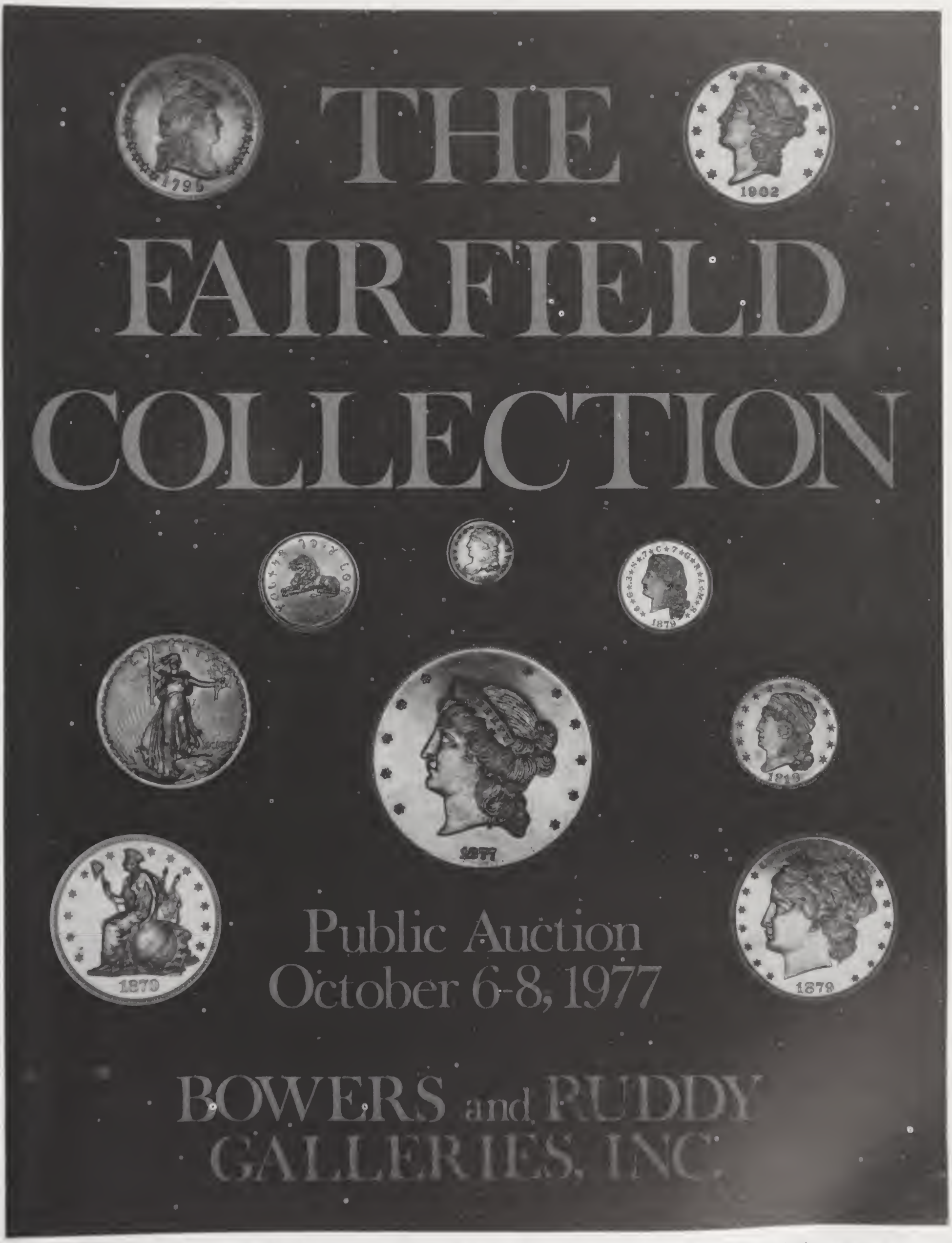
It soon proved that 1975 and the following year were ideal times to buy gold coins, for in later years prices would go up to much higher levels.

In 1975 a new publication on gold coins made its debut. Written by David W. Akers with the assistance of the Paramount International Coin Corp. staff, *United States Gold Coins: An Analysis of Auction Records. Gold Dollars, 1849-1889* proposed to:

> provide the reader with a comprehensive listing and analysis of auction records for each date and mint gold dollar so that he will have a more accurate gauge of the relative rarity of the coins in this series than has ever before been available.
>
> With the exception of the usual pricing catalogues, which at most list mintages and estimated values and various grades, only Walter Breen's series of monographs has ever treated the field of United States gold coins in detail.
>
> To the best of my knowledge, no comparable publication of auction records for United States gold coins has ever been available to collectors . . .
>
> Our main objective was to obtain information concerning the *relative rarity* of gold dollars with respect to both condition and number of pieces available . . .
>
> In order to be able to quantify the relative rarity of the coins in the gold dollar series with respect to condition, we have calculated the "average grade" using a simple arithmetic average (based on the Sheldon system).

This and the other volumes to come in the same series served to increase collector interest in various gold denominations. More importantly, the research demonstrated the relative rarity of particular varieties by grade. It was shown that even though a coin may have a large mintage and be common in circulated grades such as Very Fine or Extremely Fine, in Uncirculated preservation it may be an extreme rarity or, in some instances, there may be no known examples.

The books brought two new concepts to the attention of numismatists. First, the relative availability of a coin's appearance at auction was based on the number of times that a particular variety was available for sale at auction, divided by the number of sales that were used for the survey.



The 1977 sale of the Fairfield Collection included many gold coins and realized nearly $3 million, the highest price a single collection ever sold for at public auction up to that time.

The problem with this analysis, of course, is that it fails to take into consideration multiple auction appearances of the same coin specimen. David Akers addressed this and noted that this factor was common to most listings and that the overall findings were correct in a relative sense.

The second new concept was that of average grade. To obtain an arithmetic average, Dr. William Sheldon's system of using numerical grades was applied. For example, if an Extremely Fine coin designated as EF-40 on the Sheldon scale and a Very Fine (VF-20) coin were offered at auction, and these were the only two appearances, the average grade of this particular coin would be 30. Several problems arise with this idea, however. First of all, different cataloguers grade the same coin in different manners. Therefore, the identical coin might be given two different grades in two separate catalogue appearances. In one instance cited by David Akers a 1797 half eagle variety appeared four times and was called About Uncirculated twice and Uncirculated on the other two occasions. Further, in early years there was often a tendency to overgrade rarer specimens, using the curious logic that, for example, an 1861-D gold dollar, a rarity in this series, should be graded more leniently than a common variety. Because of this, and also because grading standards have sharply tightened in recent years, the data gathered from auction catalogues indicates that top grade examples, particularly Uncirculated coins, are more frequently encountered than is actually the case.

The Akers books were quickly adapted as useful working tools by cataloguers and collectors alike. What is the relative rarity of an Uncirculated 1854-O double eagle, or an 1875 business strike gold dollar, or an 1830 quarter eagle? Answers could be quickly found by using one of the Akers books.

By February 1975 gold had declined in price. At a time when bullion was trading at the $180 level, Paramount International Coin Corp. offered at auction the Davies-Niewoehner Sale. In this offering were many fabulous gold rarities. The cataloguing was done personally by David Akers and possibly represents his finest auction effort.

An 1848 quarter eagle Proof brought $60,000. An 1880 coiled hair stella fetched $67,500, while $92,500 was obtained for an 1828 half eagle, and $70,000 for an 1829 late type half eagle. An 1838 Proof eagle brought $105,000.

Gold continued its downward descent. In June 1975 bullion traded at $160. In September it dropped to $130, and at the end of 1975 it was at the $140 level. In April 1976 it went below $130 to its low of $103 reached the following August. Bullion closed the year at $135.

In March 1976 a beautiful offering of Proof gold coins was sold by Stack's. These were pieces from the John Work Garrett Collection considered to be redundant to the main collection owned by The Johns Hopkins University. Many complete sets of gold Proofs dated from 1862 to 1906 were offered, including the very valuable 1875 set which realized $320,000. The auction realized over $2 million.

With gold around the $160 level in October 1977, a fine collection of gold issues was sold by Bowers and Ruddy Galleries as part of the Fairfield Collection. A 1796 quarter eagle without stars fetched $15,500, an 1826 coin of the same denomination brought $10,000, and $19,000 was realized by an 1834 with motto $2.50. The 1841 quarter eagle brought $19,000, an especially nice 1848 CAL. fetched $18,500, and a Proof 1875 quarter eagle brought $15,000. The 1879 flowing hair stella fetched $18,000 and a particularly outstanding 1799 $10 brought $10,000. While these prices were impressive records at the time, and while the sale, which totalled nearly $3 million, represented the highest price a single collection ever sold for at public auction, many of the realizations seemed cheap in the light of figures posted a few years later. "Today's record price is tomorrow's bargain" is a phrase often heard in numismatics. And, a perusal of coin auction prices over the past century certainly bears this out.

In 1978 interest in gold increased again, and by August the price reached $200 an ounce. At that time the Nathan M. Kaufman Collection was sold by Rarcoa.

Born in Marquette, Michigan in 1863, Kaufman's interests were related to the American issues. Near the turn of the century his direction changed, and he gave or sold his collection to his brother, Louis G. Kaufman, who took an active interest in collecting and added quite a number of specimens to the collection. The highlight of the sale was the 1825/4 half eagle which had not been

the
N. M. Kaufman
collection

Presented by:

Chicago, Illinois

August 4 - 5, 1978

Rarcoa

A major numismatic event in 1978 was the offering at auction by Rarcoa the collection of N. M. Kaufman. Long hidden away in a bank vault in Marquette, Michigan, the coins delighted numismatists when they were rediscovered. The featured coin in the offering was one of two known examples of the 1825/4 overdate $5, the piece pictured on the catalogue cover shown here.

offered since the Jenks Collection in 1921. The Kaufman piece, grading Very Fine, brought $140,000.

The buyer of the 1825/4 was the Kagin Coin Co., which lost no time in stating that the purchase had been one of the greatest bargains ever and that much more would have been paid if competition had made this necessary.

By the time of the Robison Sale by Stack's in February 1979, gold reached the $250 per ounce level. Ellis Robison, president and treasurer of the John L. Thompson & Sons Co., the nation's oldest wholesale pharmaceutical firm, had collected an excellent cabinet of gold coins over the years. Many pieces brought record prices.

The most important numismatic sales event of the time was the series of four Garrett sales auctioned by Bowers and Ruddy Galleries to the order of The Johns Hopkins University. The auctions were spaced over a period of one and a half years beginning in November 1979 and ending in March 1981.

Inflation was roaring on a broad front during this period. Speculators were bidding up the price of gold to unheard of heights. People were looking to tangible assets where they could invest their money, hoping to retain the buying power of their dollars. As a result, the United States gold coins offered in the Garrett Collection sales brought prices that "boggled the mind," in the phraseology of one observer. Virtually every coin offered set new records, and over $25 million was realized for the coins, far and away the greatest sum ever fetched by an individual collection.

The gold coins were catalogued by the present writer (Q. David Bowers) and were sold in the first three sales, November 1979, March 1980, and October 1980.

In November 1979 the Garrett specimen of the 1879 coiled hair stella was bid to $115,000, while a 1798 small eagle $5 brought $110,000 and an 1815 half eagle realized $150,000. An 1829 large planchet half eagle brought a record $165,000.

At the next sale in March 1980, there was concern before the auction that problems might arise. Gold had peaked at nearly $900 an ounce in January, only two months earlier, and the trend was downward. On the very day of the auction the Hunt interests in Texas were unable to meet margin requirements on a huge stockpile of silver they had acquired, news which frightened many involved in the bullion trade. The financial markets were likewise in an uproar, with the Dow-Jones Industrial Average hitting a new yearly low on the same day.

None of this, however, stopped the bidders from enthusiastically competing for the quarter eagles offered in that event. A 1796 without stars reached $125,000, while an 1821 was bid to $120,000. A Proof 1831 brought $105,000, and a superb 1834 without motto bought $135,000. The list of fabulous prices realized could go on and on.

The last of the Garrett Collection sales to contain gold coins was held in October 1980. The $10 pieces were offered and brought record prices once again. A 1795 eagle brought $130,000, while a 1798/7, with six stars facing, realized $120,000.

By the time all was said and done with the Garrett Sale, the 2,354 lots of copper, nickel, silver, and gold coins brought over $25 million, with the unheard of realization of over $10,000 per lot average! Still, many of the buyers, including numerous dealers, felt they had made good buys. One observer noted that rare gold coins were indeed inexpensive in comparison to the 1918 24-cent United States inverted airmail stamp, which on several occasions sold for more than $100,000, despite 100 examples being known to stamp collectors.

After the Garrett sales ended, the American economy, fueled by inflation for many years, ran into difficulty. The election of Ronald Reagan was seen as an effort to change the situation, and within a year the inflation rate, which had been running at a 13 percent annual level, was reduced sharply. Bank interest rates remained high, however, with the result that 1981 and 1982 saw much investor uncertainty. Prices of rare gold coins offered at auction in general declined from higher levels. As of this writing, in the summer of 1982, the future course of history is unknown. If history repeats itself, which it often has a way of doing, then prices of the present time may prove to be unbelievable bargains in the future, just like record prices realized in the past seem incredibly cheap today.

Bowers & Ruddy Galleries

The Garrett Collection Sales

FOR
THE JOHNS HOPKINS UNIVERSITY
SALE I. PUBLIC AUCTION
NOVEMBER 28-29, 1979

Cover of the first of four Garrett Collection sales held 1979-1981 by Bowers & Ruddy Galleries for the Johns Hopkins University. Pictured on the cover is Evergreen House, the ancestral home of the Garrett family.

Coin World®

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COMBINING WORLD COINS & NUMISMATIC SCRAPBOOK

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Simply no superlatives adequate

Garrett bidders pull no punches

By David L. Ganz
Special Correspondent

Bowers and Ruddy Galleries sold part of the Johns Hopkins University's Garrett collection of U.S. coins at public auction sale in New York City on Nov. 28-29, and the prices realized for the 622-lot offering was an incredible $7,067,000, a world's record averaging more than $11,000 per lot.

Included in the extensive offering of Colonial and United States coins were more than a dozen specimens which are belived to be unique, an equal quantity of coins of which no more than three are known to exist, and literally dozens of major rarities of whose total mintage today no more than 20 specimens survive.

Bidding ran at a feverish pitch at the well-attended sale, the first of four that Bowers and Ruddy plan for the collection which was formed over the past century by T. Harrison Garrett and his heirs and donated to the Baltimore, Md., University.

Dealers from all over the United States, and Europe, and collectors from around the world crowded into the ballroom of the St. Moritz Hotel just off Central Park in mid-Manhattan to attend the evening sessions which were called by auctioneer George Bennett.

Highlighting the auction was the second sale of a rare 1787 Brasher doubloon in the past five months, after an absence from the marketplace of 57 years.

Sold in the presence of Colonial goldsmith Ephraim Brasher's great-great-grandson and great-great-great-granddaughter, the choice, Uncirculated (MS-63) piece brought a world's record coin auction sale price of $725,000 in spirited bidding.

The successful, winning bidder was Martin Monas, a New York attorney, who purchased the coin for a client.

The earlier example, of course, was sold by RARCOA at Auction '79 in St. Louis this past summer for $430,000, then a world's record coin auction price.

The two Brasher descendants, Milton Brasher and his daughter Deborah, were introduced to the packed auction throng by Q. David Bowers, principal in the firm conducting the auction of the Johns Hopkins University property.

For the five lots preceding the Brasher doubloon, the crowd was murmuring and restless as it awaited the call of lot 607.

It was announced without fanfare by auctioneer George Bennett. He simply said, "I have lot 607 with an opening bid of $350,000."

He then asked for a bid of $400,000 and got no takers.

A bid then was received in the sum of $360,000 and another of $370,000. At $400,000 Art Kagin, of Des Moines, Iowa, commenced bidding. The bidding went to $425,000 and $450,000, with Kagin coming back with the latter figure.

A bid of $475,000 was registered and

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The finest known example of Ephraim Brasher's enigmatic doubloon, lot 607 brought $725,000 in the Bowers and Ruddy sale, eclipsing by $295,000 the single coin record auction price registered five months ago by a sister specimen of the desirable Confederation issue at Auction '79.

Graded an incredible MS-60-plus this first year of issue 1793 Chain AMERICA Large cent commanded an unprecedented $115,000 in the first session of Bowers and Ruddy's Johns Hopkins University sale.

One of the greatest rarities in U.S. numismatics, the 1853-O Without Arrows and Rays half dollar fetched $40,000.

Not listed in Judd, this pattern half dollar of 1877 (similar to J-1534) but struck in silver brought $24,000 at the Garrett sale.

Early coppers soaring upon frenzied bidding

Bowers and Ruddy Galleries sale of the Garrett collection smashed every conceivable price record in the field of early American coppers on Nov. 28.

The highest price ever paid for a Large cent, $115,000, was received for an Uncirculated Chain AMERICA issue of 1793 in MS-63. Other specimens also reached for new record heights.

The very first lot set the pace for the auction sale, as a 1793 half cent (Gilbert-1) in EF-45 went for $10,000 to gasps from the crowd. A 1795 half cent (G-1) in choice MS-65 went for an incredible $30,000. This was then followed by a 1796 G-1 in EF-40 which weighed in at $14,000 after an opening bid of $8,000 and a series of jumps that auctioneer George Bennett elicited from the crowd.

A comparable price of $14,000 was then received for a 1797 half cent (G-3) in AU-55 condition.

What was more remarkable was that a number of more common coins also jumped sharply in value contrasted to the prices that are being regularly quoted from many dealers. An original Proof 1836 half cent (G-1) went for $9,000 after a $2,500 opening bid. The 1847 second restrike Proof brought $4,400, while an original 1844 (G-1) Proof went for $2,800.

Dealer Art Kagin, involved for more than half a century in coins, commented that "half cents are finally coming into their own" upon viewing the prices realized, further adding that "many years ago, these coins were all commonly available and sometimes even sold by the roll."

Rounding out the Proof selection of half cents, an 1845 went for $9,500, the 1846 brought $5,200, the 1847 went for $6,200, and an 1849 brought $6,800.

Large cents also proved spectacular in addition to the Chain AMERICA issue. Another 1793, the Chain AMERI, variety (Sheldon-1) brought $29,000 in AU-50. The 1793 Wreath, Vine and Bars edge (Sheldon-8) went for $24,000 in MS-60 condition. At $36,000, the Liberty Cap (S-13) in AU-50 also commanded applause.

Another major bid was achieved for a 1794 S-24 cent, MS-63, which commanded a $17,000 bid after beginning at the $3,800 mark.

Dealer Harvey Stack commented after the sale of this

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The initial lot in the Garrett I sale, this 1793 half cent brought $10,000, setting the trend for the record copper prices brought during the auction.

A "Coin World" report concerning Bowers & Ruddy Galleries' first of four Garrett Collection sales, 1979.

Choice coins still bring record prices

By Jane Hutchins
and William T. Gibbs

Record numismatic prices were much less common during the last two months of 1980 and the first eight months of 1981, in sharp contrast with the period beginning in August 1978, which saw record prices set at nearly every major numismatic auction until last fall

It comes as no surpise that the numismatic market was subdued during the past 10 months, when compared to that earlier, hectic period. Described by some as a "market slump," and others as a "return to sanity," record prices became more scarce following the third Garrett Collection sale conducted Oct. 1-2, 1980.

For the past several years, *Coin World* has kept records of every numismatic item bringing $20,000 or more at public sale, both in the United States and in foreign auctions. Earlier examinations of auction action appeared in the Oct. 31 and Nov. 7, 1979, and Oct. 15, 1980, issues of *Coin World*

The excitement began in August 1978, with the sale of the fabulous N.M. Kaufman Collection by Chicago's Rare Coin Company of America and the Robert Branigan American Numismatic Association convention sale by Bowers and Ruddy Galleries of Los Angeles.

The trend continued on both sides of the Atlantic through the rest of the year, but the numismatic market did not kick into high gear until 1979. Super interest in choice numismatic material remained unchecked for more than a year and a half, showing no signs of slowing until following the 1980 ANA sale and the Oct. 1-2 Garrett III sale by Bowers and Ruddy.

Since the first of the year, there have been three traditionally "major" numismatic auctions: the fourth and final Garrett Collection sale March 25-26, the four firm, four session Auction '81 in New Orleans July 23-24, and the 1981 ANA convention auction held July 28-Aug. 1, also in New Orleans.

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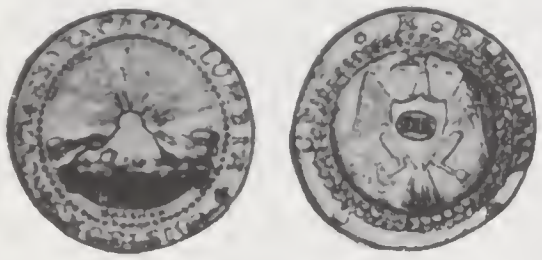

$625,000

$475,000

$125,000

U.S. 1787 Brasher gold doubloon, Unc. (MS-63)	$725,000	Bowers & Ruddy-Garrett sale Nov 28-29, 1979
1787 Brasher gold doubloon, eagle's breast (punch)	$625,000	Bowers & Ruddy-Garrett sale Mar 25-26, 1981
U S 1851 Augustus Humbert $50 Proof	$500,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U.S. 1907 Pattern $20 Indian, Roman Numerals J-1776	$475,000	ANA-Bowers & Ruddy, Aug 1, 1981
U.S 1787 Brasher gold doubloon, AU	$430,000	Auction '79-RARCOA July 26-27, 1979
U.S. 1804 Class III silver $1	$400,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1852/1 Augustus Humbert $20 gold Proof	$325,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U.S. 1855 Kellogg & Co. $50 Proof	$300,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U.S. 1855 Wass, Molitor & Co. $50	$275,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
Athens, Greece, silver decadrachm, 470 B.C.	$272,240	Bank Leu-Munzen und Medaillen May 28, 1974
U.S. 1849 Cincinnati Mining & Trading Co. $10 gold	$270,000	Bowers & Ruddy-Garrett sale Mar. 26-27,1980
U.S. 1854 Kellogg & Co. $50 Proof	$230,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U.S. 1907 Roman Numerals Ultra High Relief $20 Gold	$230,000	Auction '80-Paramount Aug. 14-15, 1980
U.S. 1873-CC No Arrows 25¢ MS-65	$205,000	NERCA Sale - Apr. 10-12, 1980
U.S 1830 Templeton Reid $5 gold	$200,000	Bowers & Ruddy-Garrett sale Nov 28-29, 1979
U.S. 1850 F. D. Kohler $50 gold ingot, (1,348.9 grains)	$200,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1792 Birch cent, J-4	$200,000	Bowers & Ruddy-Garrett sale Mar. 25-26, 1981
U.S. 1783 silver Nova Constellatio Mark	$190,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1827/3 Original Proof 25¢, Browning I	$190,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1849 Pacific & Co. $5 gold	$180,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1879 $4 Coiled Hair Stella	$175,000	Auction '80-Superior Aug. 14-15, 1980
Roman gold aureus of Maxentius 310-311 A.D., Unc.	$171,100	Bank Leu-May 8-9, 1979
U.S. 1795 Draped Bust silver $1	$170,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
Roman gold Aureus of Emperor Quintillus 269-270 A.D.	$168,200	Schweizerischer Bankverein, Apr 19, 1980
U.S. 1783 silver Nova Constellatio Quint	$165,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1829 $5 large date, large planchet	$165,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
Canada 1911 silver dollar pattern, 3 known	$160,000	Auction '79-Paramount July 26-27, 1979
U.S. 1815 $5 gold	$150,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1885 Trade dollar	$150,000	ANA-Paramount Aug. 13-17, 1974
U.S. 1875 $3 gold Proof (20 struck)	$150,000	Stack's-Ullmer sale Dec. 1974
U.S. 1915 single Panama-Pacific set, original case	$150,000	Numisco-Feb. 22-24, 1980
Roman aureus of Allectus, London Mint, 286-293 A.D.	$147,500	Bank Leu-May 8-9, 1979
U.S. 1894-S Barber dime	$145,000	Auction '80-Rarcoa Aug. 14-15, 1980
U.S. 1825/4 $5 gold	$140,000	RARCOA-Kaufman sale-Aug. 4-5, 1978
U.S. 1834 No Motto gold $2.50	$135,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. undated (1849) Miners' Bank $10 gold	$135,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1879 Quintuple Stella $20, gold J-1643	$135,000	NERCA sale - Apr. 10-12, 1980
U.S. 1795 gold $10 Small Eagle 12 Leaves BU	$130,000	Bowers & Ruddy-Garrett sale Oct. 1-2, 1980
Syracuse silver Attic decadrachm 405-400 B.C.	$126,506	Bank Leu-Munzen und Medaillen May 28, 1974
U.S. 1910 $20 Roman Finish Proof 69+	$125,000	NERCA sale - Apr. 10-12, 1980
U.S. 1796 Without Stars gold $2.50	$125,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
Russian 1825 Constantine I pattern rouble, smooth edge	$122,500	ANA-NERCA July 29-Aug. 1, 1979
Poland King Sigismund III, 1621, 100 gold ducats, EF	$120,000	Stack's Sale Sept. 18, 1980
U.S. 1821 gold $2.50 Proof	$120,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1793 Chain America cent, Sheldon-3 Unc. 65	$120,000	Auction '80-Paramount Aug. 14-15, 1980
U.S. 1798/7 gold $10, 7 Stars Left, 6 Stars Right	$120,000	Bowers & Ruddy-Garrett sale Oct. 1-2, 1980
U.S. 1858 $10 gold Unc.-67	$115,000	Auction '80-Paramount Aug. 14-15, 1980
U.S. 1828 $5 perfect date, MS-65	$110,000	Auction '79-Stack's July 27, 1979
U.S. 1794 silver $1, Unc.	$110,000	Superior-1973
U.S. 1884 $20 gold, Proof	$110,000	Stack's Ullmer sale Dec. 1974
U.S. 1798 $5 gold, Small Eagle reverse	$110,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1851 Baldwin & Co. $20 gold	$110,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1792 silver center cent pattern (7 specimens)	$105,000	Pine Tree-GENA sale Sept. 20, 1974
U.S. 1838 gold $10, no motto, Proof	$105,000	Paramount NASC sale, Feb. 14-15, 1975
U.S. 1879 "Schoolgirl" pattern silver $1, J-1608	$105,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1880 Flowing Hair Stella $4 gold Proof (Judd 1660)	$105,000	Auction '80-Superior, Aug. 14-15 1980
U.S. 1831 gold $2.50	$105,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1870-CC $20 gold, EF, 25 known	$102,500	Auction '79-Superior July 26-27, 1979
Rome Mint aureus of Vespasian and Domitilla, 81-84, EF	$100,300	Bank Leu-May 8-9, 1979
U.S. undated John Parsons & Co. $5 gold	$100,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. undated J. J. Conway & Co. $5 gold	$100,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1879 $20 pattern Proof	$100,000	Auction '79-Stack's July 27, 1979
U.S. 1829 $5 small date, large planchet	$100,000	Kagin's-MANA sale Nov. 1-2, 1974
U.S. 1915-S Panama-Pacific $50 octagonal gold	$100,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. undated (1849) J. S. Ormsby $10 gold	$100,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1783 silver Nova Constellatio Bit	$97,500	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1933 $10 gold	$97,500	Stack's-Kahn sale Oct. 23-24, 1980
U.S. 1915-S Panama-Pacific $50 round gold	$95,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1792 Silvered Centered cent	$95,000	Bowers & Ruddy-Garrett sale Mar. 25-26,1981
U.S. 1776 Continental dollar, silver, Newman 1-C (unique)	$95,000	Bowers & Ruddy-Garrett sale Oct. 1-2,1980
Roman Emperor Probus gold medal, 277, unique	$94,400	Bank Leu-May 8-9, 1979
Roman gold eight Aureii, Claudius Gothicus 268-270 A.D.	$92,800	Schweizerischer Bankverein Apr. 19, 1980
U.S. 1883 $20 gold, Proof	$92,500	Stack's-June 22, 1979
U.S. 1915 double Panama-Pacific set, original case	$92,500	ANA-NERCA-July 29-Aug. 1, 1979
U.S. 1875 $10 gold, Proof	$91,000	Stacks-Garrett sale March 12-13, 1976
U.S. 1849-C $1 open wreath	$90,000	Auction '79-Stack's July 27, 1979
U.S. 1854 $1 gold, Type II, Proof	$90,000	Bowers & Ruddy-Garrett sale Nov. 28-29, 1979
U.S. 1849 Mormon $2½ gold	$90,000	Bowers & Ruddy-Garrett sale Mar. 25-26, 1981
U.S. 1891 gold $20 Proof	$90,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U.S. 1910 gold $20 Matte Proof	$90,000	Bowers & Ruddy-Garrett sale Mar. 26-27, 1980
U.S. 1792 Half Disme Unc.-67	$90,000	Auction '80-Paramount Aug. 14-15, 1980
U.S. 1792 Birch Cent, J-6, with G.W.Pt. (George Washington President) on reverse	$90,000	Bowers & Ruddy- Garrett sale Mar 25-26, 1981
U.S. 1874 Pattern $10 gold J-1373	$90,000	ANA-Bowers & Ruddy July 28-Aug. 1, 1981
Rome aureus of Didia Clara, EF	$88,500	Bank Leu-May 8-9, 1979
Salzburg 25 Dukaton 1594 in gold	$87,500	Spink's-Zurich, 1981
U.S. 1823/22 25¢ wire edge	$87,500	Auction '80-Stack's Aug 14-15, 1980
U.S. undated John Parsons & Co. $2.50 gold	$85,000	Bowers & Ruddy-Garrett sale Nov 28-29, 1979
U.S. 1920-S $10 gold, MS-65	$85,000	Stack's-June 22, 1979
U.S. 1819 $5 50/50	$85,000	Bowers & Ruddy-Garrett sale Nov 28-29, 1979
U S 1876-CC 20 cent, AU-55	$85,000	Auction '80-Superior, Aug. 14-15, 1980
U.S 1901-S quarter dollar silver BU	$85,000	Auction '80-Stack's, Aug 14-15, 1980
U.S. 1932 $20 Gold	$85,000	NERCA, Apr 10-12, 1980
U.S. 1909 gold $20 Matte Proof	$85,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U S 1914 gold $20 Matte Proof	$85,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
Syracuse silver Attic decadrachm, 400 B C	$82,831	Bank Leu-Munzen und Medaillen May 28, 1974
Pontus gold stater of King Pharnaces I, 185-160 B.C , Unc	$82,000	Numismatic Fine Arts Mar 25-26, 1976
Australia 1852 £1 Adelaide Govt Assay Office	$81,900	Spink's Australia, Sydney, Nov 19, 1980
Syracuse silver decadrachm, unsigned	$81,200	Schweizerischer Bankverein Apr 19, 1980
U S 1875 $5 gold (8-10 known)	$81,000	Garrett sale 1976
U S 1804 25¢, silver, Browning I	$80,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U S 1860 $20 gold Proof	$80,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U S 1865 $20 gold Proof	$80,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
U S 1866 $20 gold Proof	$80,000	Bowers & Ruddy-Garrett sale Mar 26-27, 1980
Spain 1742 Lima gold doubloon, counterstamped by Brasher	$80,000	Bowers & Ruddy Garrett Mar 25-26, 1981

The Garrett Collection, sold by Bowers & Ruddy Galleries 1979-1981, rearranged the record book for prices realized at auction, as this feature article in "Coin World" indicates.

numismatic news

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California Gold Tops Record-Setting Bids At Part II of Garrett Collection Auction

The king of American coins, an 1804 silver dollar, played crown prince to a proof octagonal 1851 $50 gold slug struck by, and the personal specimen of, U.S. Assayer Augustus Humbert at Part II of the Garrett Collection Sale held March 26-27 by Bowers & Ruddy Galleries in Beverly Hills, Calif.

Though the $400,000 price tag of the 1804 dollar represents a record high for any U.S. silver coin, it was eclipsed by a $500,000 bid for the proof 1851 California gold slug. However, all the respect due a king was paid to the dollar.

According to Q. David Bowers, president of Bowers & Ruddy, a recess was called after El Paso, Texas, dealer Larry Hanks made the winning bid and TV cameras, photographers, reporters and others gathered around him for his reaction.

"The price was very reasonable," Hanks is reported to have said, according to a story that appeared in the Los Angeles *Times*. "We had $660,000 (limit) marked on our catalog." He added that he had spent six weeks researching the coin and attended the sale solely for the purpose of buying it.

The world's most expensive silver coin is this 1804 U.S. dollar, which sold March 26 during Part II of the Garrett Collection Sale in Beverley Hills, Calif.

Hanks indicated to Bob Wilhite, *News* Coin Market editor, who caught up to him the day after the sale, that the coin was purchased for stock and after holding it for awhile and perhaps putting it on display, it would be offered for resale. Hanks also told Wilhite that he had already been approached and offered a "considerable" profit for the 1804 dollar.

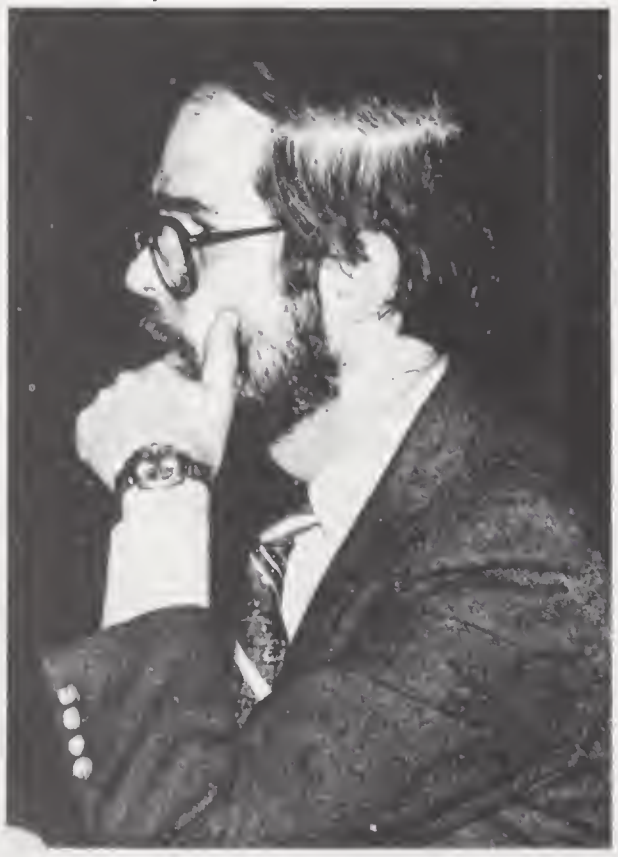
Making the high bid for the 1851 proof slug was Don Kagin of Kagin's of Des Moines, Iowa. The $500,000 he paid for it ranks it second only to the $725,000 bid last November for a Brasher doubloon in the first part of the Garrett Sale.

The two record bids tallied with the results of the other 570 lots put on the auction block at the sale brought the total proceeds of the second part to $11,739,530 and the total for the two parts to $18,795,000, more than ever realized at any other American fine arts auction, Bowers noted.

Beginning the sale was an AU 1804 quarter that attracted a bid of $80,000 and

(GARRETT, Page 12)

Portrait of a Buyer...and a Seller—Larry Hanks, top right, accompanied by his partner, William Pullen, offer a study in concentration after Hanks bid $400,000 for an 1804 silver dollar in the Garrett Sale. Below, Q. David Bowers, whose firm conducted the sale, seriously studies the bidding on the American rarity.



Billionaire's Bind Panics Market

The inability of Texas billionaire Nelson Bunker Hunt to meet a $100 million margin call levied against his massive silver bullion holdings by his broker caused traders to panic and dump what they had March 27, culminating a four-day slide that halved the price of silver.

Hunt, who is reputed to own more than 100 million ounces of the precious metal and who was actively buying more until last week, saw his silver holdings trimmed by Bache Halsey Stuart Shields, Inc., the brokerage firm through which he did a large part of his silver business. Bache was forced to sell all of the silver Hunt held with the firm to meet his $100 million obligation following bullion's sudden decline.

That decline took silver to a low of $10.80 an ounce March 27 from $21.25 just three days before. The price recovered to $12 March 28, the day Bache did most of its selling, and closed the day April 2 at $14.60.

The forced silver sale cost Bache $50 million of its own money, a sum Hunt intends to reimburse the firm, according to published reports.

Also in the wake of silver's decline, Hunt renegotiated a contract with Engelhard Minerals and Chemicals Corp. that had originally required him to purchase 19 million ounces of silver at a price of $35 an ounce. Engelhard agreed to cancel the purchase in return for oil and gas exploration rights to 3.5 million acres in Canada's Beaufort Sea, estimated to be worth about $500 million, and for 8.5 million ounces of silver.

Analysts said that even though the bulk of Hunt's silver seems to have remained in his hands and off the market, trader fears that Hunt's initial money problems could have forced him to sell even more

(SILVER, Page 3)

A world's record price of $100,000 for a piece of paper money was paid April 2 by Jonathon's Coins of Los Angeles, Calif., for the finest known example of an 1890 Treasury or Coin Note (F-379-a). One of three known examples of this type, the note, known as the "watermelon type," was purchased from another Los Angeles dealer, Frank Draskovic, in a private transaction.

The Garrett Sale set many prices records. Part II, held in March 1980, came at the same time gold and silver bullion prices were plunging. Nevertheless, the auction went on to break just about every record in the book.

Gold Dollars

5

The United States gold dollar denomination, minted for circulation from 1849 through 889, has several antecedents. The Act of April 2, 792, which provided for various coins to be uck, did not include a gold dollar. In gold the arter eagle, half eagle, and eagle were author-ed, while the metal for the dollar was stipulated silver.

Thus by default the first gold dollars produced what is now the United States were private ues coined by the Bechtler family in Ruther-rdton, North Carolina. Around 1830 North arolina was the foremost gold producing district the United States. In 1825 deposits of the llow metal totalled $18,000, followed by a 0,000 figure the next year, then $21,000 the ar following. In 1828 some $46,000 in gold was posited, a figure which proved small when mpared to $128,000 the following year. By 31 the total was $294,000.

Christopher Bechtler, a German trained as a ldsmith and gunsmith, arrived in America in 29 and journeyed to Rutherfordton, where he t up a jewelry store in a house four miles north the town. His son Augustus proved to be a pable assistant. On July 2, 1831 Bechtler adver-sed that he would receive gold and produce om it $2.50 and $5 pieces at his store-residence. t the same time the editor of the *North Carolina pectator and Western Advertiser* noted, in part:

> We have been shown a specimen of the ingots assayed and stamped by Mr. Christopher Bechtler at his establishment near this town. The piece shown us, in point of execution of the relief letters, is not as handsome as we had wished to have seen; but Mr. B. informs us that he intends to prepare new dies and make such improvements as had suggested themselves to his mind . . .

The coining enterprise flourished, as an advertisement dated August 27, 1831 in the same publication noted:

> The undersigned [C. Bechtler] having coined a great quantity of North Carolina Gold into pieces of $2.50 and $5.00 value of 20 carats fine, and being well prepared to increase the business to any extent, at his establishment 3½ miles north of Rutherfordton on the road leading from Rutherfordton to Jeanstown, invites the attention of miners in S. Carolina and Georgia, as well as North Carolina, to the advantage which would result from having the product of their mines coined, or made into ingots, bearing their just value, rather than disposing of it in its fluxed state, without an assay, and therefore liable to produce an improper value; gold in a fluxed state, of 22 and 23 carats, is generally sold for 84 cents per dwt. in the Bank, whereas its intrinsic value, if coined, is 90 and 94 cents—consequently an actual saving of 6 cents per dwt. will be made by having it coined—after paying all the expenses of coining, etc. . . .

The advantages for the miners were several. First, the journey from North Carolina to Philadelphia was long and arduous and entailed paying high insurance rates to cover the bullion carried. Following refining and conversion of the metal into coin at the Philadelphia Mint, and its attendant costs, the return trip entailed additional delays. The Bechtler enterprise made it possible for miners to convert gold to coins quickly, at a figure close to the intrinsic value, and to receive in exchange coins which were acceptable in the channels of local commerce. The government was quite aware of Bechtler's private coinage operation and made no effort to intervene, realizing that a service was being provided to local citizens, a service not available from the government at the time. In 1838 a federal facility was established at Charlotte, but so ingrained was the Bechtler

business into the mining and mercantile community that the Bechtlers continued to prosper, despite government competition. In 1842 Christopher Bechtler died, after which time his son Augustus continued operations. Within a year or two Christopher Bechtler the younger, a nephew of the original coiner, took the helm. Around that time Director of the Mint R. M. Patterson reported that:

> Assays repeatedly made at this mint showed that the coins thus fabricated [by Bechtler] are below the nominal value marked upon; yet they circulate freely at this value, and therefore it must be more advantageous to the miner to carry his bullion to the private rather than the public mint.

Quality continued to deteriorate, but still Bechtler coins sustained a measure of success. It is believed that discontinuation occurred in the early 1850s.

From all available evidence it is apparent that the first American gold dollars were produced by Bechtler in 1832. From that time onward specimens were produced of the dollar denomination as well as the previously-minted $2.50 and $5.00 values.

Beginning in the early 1850s privately-minted gold dollars were produced by jewelers and others in California, using Gold Rush metal. None of the other gold discoveries in the United States, with their attendant private coinages, saw issues of the dollar denomination. Coinage of Colorado and Utah began with $2.50, and the lowest Oregon value was $5.00.

In 1836 pattern gold dollars were produced at the Philadelphia Mint, marking the first government coinage of the denomination in gold metal. Some time before March 14, 1836, Christian Gobrecht, Mint engraver, produced dies for a gold dollar, for on that date R. M. Patterson, director of the Mint, sent a specimen of the gold coin to Levi Woodbury, secretary of the Treasury. This was received in due course, and on March 18, the latter official requested nine additional pieces.

Today Christian Gobrecht is among the best remembered of all early mint engravers. Born on December 13, 1785, in Hanover, York County, Pennsylvania, he was the sixth son of Reverend John Christian Gobrecht and his wife, who sailed to America from Germany and settled in 1755. In his early years Christian Gobrecht is believed to have served as an apprentice clockmaker in Manheim, Pennsylvania, during which time his master died. He subsequently moved to Baltimore where he engraved clock faces. Later he cut newspaper letter type and engraved dies and seals. In 1810 he engraved a portrait of George Washington for the *New American Biographical Dictionary* published in the same city. The following year, 1811, he relocated in Philadelphia where he engaged in portrait plate engraving and diesinking. In 1816 he was employed by Murray, Draper, Fairman & Co., banknote engravers, in which position he produced plates for printing private issues of various denominations.

In 1825 Gobrecht was commissioned to design a medallic award for the Franklin Institute, utilizing a design by Thomas Sully. Other Gobrecht work of the era included the seal of Saint Peter's Church in Philadelphia, a medallic portrait of Charles Willson Peale (the famous museum curator), an award medal for the Massachusetts Society of Manufacturers, and the prolifically-issued award medal for the Massachusetts Charitable Mechanics Association. The latter medals were issued in gold, silver, and copper for a period of many years and are encountered with some frequency today.

In 1836 Gobrecht was appointed as a diesinker at the Philadelphia Mint and became the assistant to William Kneass, the chief engraver. It is believed that Gobrecht did private commission work for the Mint as early as 1826, and undoubtedly these efforts are what gained him the position.

Apart from his much-admired diecutting abilities, Gobrecht also was an inventor. Beginning in 1810 he devised a medal-ruling machine which translated a 3-dimensional medal into a fine portrait on paper. Apparently the device was completed in 1817, at which time a head of Emperor Alexander I of Russia was reproduced on paper and was described as "very striking and excited great attention." During the 1816-1821 years Gobrecht devised a new type of reed organ, a mirror camera-lucida device, and a doll which was said to reproduce spoken words.

Following the death of William Kneass on January 21, 1840, Gobrecht was named as the chief engraver of the Philadelphia Mint, the third person to hold that post. He remained in that position until his death on July 23, 1844.

Today Gobrecht is best remembered for his illustrious series of pattern dollars conceived in 835 and executed in 1836, 1838, and 1839. The eated figure of Liberty is on the obverse (the first ppearance of the motif which eventually would ecome the American standard for silver coinage) nd a flying eagle is shown on the reverse. Adnired as the design was at the time, the flying agle device was abandoned and never saw use in irculation, except during the 1856-1858 years hen it was resurrected for a brief time for use on he copper-nickel cent, and 1907-1933 when a elated motif was used on the reverse of the doule eagle.

In 1836 there was considerable interest in the old dollar at the Mint. Walter Breen in *The Secret History of the Gobrecht Coinages* quotes a letter from Director Patterson, dated December 28, 1836, in which he encloses a statement of the denomination, fineness, weight, and value of each of 16 different coins of values approximating $1, issued by England, Germany, Holland, Portugal, the talian states, Russia, Spain, Sweden, and Switzerland. For example, it was noted that the English quarter guinea had a value of $1.27, a Dutch half ryder was valued $1.15, a Russian ruble was worth $0.97, and a Swedish half ducat was listed at $1.10. Presumably Patterson reaoned that an American gold dollar would serve s an exchange substitute for certain of these denominations. The success of the Bechtler gold dollars, which were plentiful in circulation in North Carolina at the time, was also well known o Patterson. This may have been an additional influence.

A draft of the legislation which culminated in he Act of January 18, 1837, provided for a gold dollar, but this was not part of the final legislaion:

> Be it further enacted, that it shall be lawful henceforward to coin gold dollar pieces, of which the weight shall be twenty-five grains and eight-tenths of a grain, and which shall be legal tenders of payment at the rate of one dollar each, for all sums whatever.

Gobrecht's 1836 pattern dollars are of simple design. The obverse depicts a liberty cap at the center, with a sunburst surrounding. The liberty cap, given to freed slaves in ancient times, was a familiar device on many different 18th and 19th century coin issues, including half cents 1793-1797, cents 1793-1796, and Liberty seated silver denominations. The pattern gold dollar obverse motif was virtually identical to the liberty cap and rays design used on Mexican silver coins struck beginning in 1823. The reverse of the Gobrecht dollar displayed a palm branch in a circle, with the denomination within and UNITED STATES OF AMERICA and the date 1836 surrounding. Examples, including restrikes, were struck on several different occasions and in different metals, including gold, gold alloyed with silver, silver, copper, and oroide, the latter being a bronze alloy with additional tin which imparted a golden color.

Enthusiasm for the gold dollar denomination expanded outside of the mint, as an article in the *Philadelphia Public Ledger*, December 21, 1836, indicated:

> On Monday last, we stated that the silver dollar, the coinage of which has been suspended since 1805, was soon to be issued from the mint. We exceedingly regret this, because the silver dollar is a very cumbrous coin, will interpose an obstacle to the circulation of small gold coins, and increase the prejudice already existing in favor of paper, from its lightness. Nobody will encumber himself with silver dollars, when he can obtain any substitute. Twenty are an incumbrance in a pocket, and induce the possessor to regard silver, for money, almost as he would iron wedges or brick bats. A man might travel for five years, and carry enough gold in his pocket to pay his expenses for the whole period; while the same amount of silver would require a yoke of oxen to draw it.
>
> With this well founded objection against silver, it will never supersede paper, while with a gold coinage, paper would soon be driven from circulation, excepting for large sums.
>
> A silver dollar is not so convenient as two halves, and weighs precisely as much. Neither is a half dollar so convenient as two quarters, while it weighs precisely as much. It is therefore judicious to make silver coin as small [as] possible, and to coin no silver in any piece which the value can be conveniently given in gold. The dollar is the smallest gold coin that would be convenient, and as it would be eminently so, neither silver nor paper should be allowed to take its place. Therefore as gold in dollars is better than silver in dollars, no silver dollars should be coined . . . For two years to come, we should wish to see the whole gold coinage confined to dollars . . .
>
> (Preceding as quoted by Don Taxay in *The U. S. Mint and Coinage.*)

Despite opinions pro and con inside and outside of the Mint, nothing came to pass, and the gold dollar in 1836 seemingly slipped into oblivion.

From time to time the idea resurfaced, as in a letter dated January 22, 1844 from Director Patterson to Secretary of the Treasury John C. Spencer (as quoted by Don Taxay):

> Sir, I have been called upon to present my views to the Committee of Ways and Means as to the propriety of introducing the coinage of gold dollar pieces, and I have done so, in a letter sent to the Chairman [James McKay, a representative from North Carolina] by yesterday's mail.
>
> As one of the elements on which they are to form their judgment, I have caused some pieces to be struck, from dies prepared for a similar occasion in 1836. It is right that the head of the Treasury Department should also be furnished with one of these specimens, and I therefore send you the enclosed piece. Its weight is 25.8 grains; its volume but little more than two thirds of that of the half dime, the smallest of our coins.
>
> The opinion to which my reflections and inquiries have led me is adverse to the proposed innovation in our coinage. If it should be ordered, however, the piece sent to you is not offered as a model to be followed. The obverse should bear the head of Liberty, like our other gold coins. In the reverse, however, I think that the figure of the eagle should be omitted as in the dime and half dime.

As the preceding correspondence indicates, Patterson's desire for a gold dollar was minimal at best. In a subsequent letter the director criticized the denomination as too tiny and too easily counterfeited.

Following the discovery of gold on the American River at Sutter's Mill in California in January 1848, the nation's supply of the precious metal increased sharply. By the end of the same year talk in eastern cities centered on gold. In this atmosphere the panorama of gold coinage was restudied, and the tiny gold dollar, objectionable for several reasons in earlier years, suddenly found new favor. On January 25, 1849 James McKay, whose home state of North Carolina long favored increased government interest in gold and gold coinage, introduced legislation providing for the gold dollar denomination. The question of small size was raised again. One proposed solution was to issue coins with a hole at the center, in the manner of Oriental issues. James B. Longacre, who was named chief engraver following the 1844 death of Christian Gobrecht, engraved patterns in this format.

Born on August 11, 1794, in Delaware County, Pennsylvania, Longacre was of Swedish descent. Following an apprenticeship in a bookstore he entered the study of engraving under George Murray of Philadelphia. During the early 1830s his portraits of military heros, statesmen, and others of prominence were engraved for inclusion in the *National Portrait Gallery of Distinguished Americans*. Upon publication Longacre's work received wide acclaim.

While Longacre may have been distinguished as an engraver of steel and copper plates for printing, he apparently had little, if any, experience as a diesinker. Projected into a position of awesome responsibility when he was named chief engraver of the Mint on September 16, 1844, Longacre proceeded to execute his duties with many signs of ineptness. Today scholars lay the numerous inverted dates, blundered dates, and other diesinking errors from the mid-1840s through the next decade at his doorstep. Still, his numismatic contributions were many, and he is remembered today for numerous efforts, including the flying eagle and Indian cents, patterns, and several gold coin designs.

A letter to the *Washington Union*, published on January 27, 1849, may have inspired Longacre's engraved dollar:

> Dear Sir: I beg to lay before you a mode for coining the gold dollar, to which I would most respectfully ask the favorable attention of the public.
>
> I need not say much on the subject, and the importance of this coin. The structure of what I propose is as follows:
>
> In circumference the same as a 5-cent piece of silver, with a square hole in the center . . . leave out the eagle and Liberty cap and insert on one side 13 stars, "one dollar, 1849," or whatever year it may be coined in; and on the other side a "wreath," and the words "United States of America" . . .
>
> The object of the square hole is to make the coin thicker and broader, and to enable every person to ascertain the difference at any time, either night or day, between the gold dollar and a 5-cent piece. I have understood that one of the most plausible objections to the gold dollar has been this apprehension of seeming identity and consequent liability to imposition. The square hole in the centre will at once enable any person to detect an attempted fraud in the payment or exchange of coins to which I have alluded . . .

Sometime before January 30, Longacre prepared six engraved pattern gold dollars, three of gold and three of gilt silver, which Patterson forwarded to McKay. These were of simplistic design, each with a center hole, and were not significantly different from that proposed in the previously quoted article.

Much discussion surrounded the introduction of McKay's legislation, with Representative Joseph Ingersoll calling the gold dollar:

> A "toy coin" which was nothing more than a "little piece of precious metal, scarcely perceptible to the eye or touch, may be a plaything for the idle, or counter for the card table—perhaps a little addition to a ladies' purse in her morning shopping, or a medium of fraud upon the post office laws, by lurking concealed under the seal of a letter. Beyond these fanciful purposes it has none . . . We have dollars of silver. It is idle to have dollars of gold. Is it intended to carry the experiment still further, and duplicate all the denominations of coin? Make gold half dollars, gold quarter dollars, gold dimes, and gold half dimes" . . .

Interestingly, gold half dollars were made in pattern form at the Philadelphia Mint in 1852, and during the same decade privately minted gold half dollars and quarters flooded California, making Ingersoll's facetious comments an inadvertent prediction.

On March 3, 1849 McKay's bill was passed into law. Gold dollars became a reality as did double eagles ($20 pieces) the other main feature of the legislation.

The collection of the Library Company of Philadelphia contains correspondence of Longacre, including a woeful tale of the difficulties encountered in producing the gold dollar and double eagle dies, as related nearly a year after the fact, on February 8, 1850:

> About a year ago, while the act of Congress adding two new denominations to the gold coinage was the subject of discussion, I was informed by a gentleman in the Mint that he feared measures would be taken in relation thereto prejudicial to my position, intimating that a purpose existed on the part of another officer to have the engraving of the dies executed elsewhere and by some other hand than mine. Knowing the law designating my duties, I immediately waited on the director and apprised him that I was ready to commence with the work. He assented to my suggestion, and requested me to commence making a model in wax for the head, which I accordingly executed, and subsequently engraved the dies for the gold dollar. The engraving was unusually minute and required very close and incessant labor for several weeks. I made the original dies and hubs for making the working dies twice over, to secure their perfect adaptation to the coining machinery. I had a wish to execute this work single handed, that I might thus silently reply to those who had questioned my ability for the work.
>
> The result, I believe, was satisfactory, but I then found I had tasked myself severely for my health, and knowing that my labor would necessarily be increased with that which was to follow, I took occasion to say to the director, in the month of May last, that my department was not strong enough for such an emergency; as it rested with him legally and properly to order such assistance as I might require. I was surprised to find that he objected to making any addition to the force of my department by the employment of any person to assist me, saying for that matter he saw no objection to having the engraving done out of the Mint—that it might be done by contract, as it was in France—that if it could not be done in the city, it might be done in any other part of the country or even in Europe. This remark closed my lips against any further application for aid; the law required that I, as a proper officer, should engrave all the dies for the Mint, and left it to the direction of the director as to what assistance should be given me. I could not direct or control any work done out of the mint, or by contract; I was not so empowered . . .

Longacre's defense was against a real situation, for his inexperience with diesinking caused him many problems. The gold dollar dies had to be done twice before they were satisfactory, with completion not coming until May 7, 1849. Patterson, contemptuous of Longacre, tried to have him removed from the Mint, but Longacre saved his position by appealing directly to the President. Charles Cushing Wright, an engraver of medals who is believed by some to have been foremost in the field at the time, was a friend of Longacre and intervened by furnishing assistance for Longacre at the Mint. Efforts were made to contact others outside of the Mint to do work which it was felt Longacre was incapable of executing, for Bouvet, engraver at the Paris Mint, was contacted in this regard and actually prepared a private pattern $10 issue to illustrate his ability. The talents of C. C. Wright and others were solicited as well, but Longacre prevailed, and all work was eventually performed within the walls of the Mint.

In *Major Varieties of U.S. Gold Dollars* Walter Breen gives a colorful view of the situation:

> When the Act of March 3, 1849 became law, Longacre had to start work on new original dies, and he worked under a number of handicaps. His inexperience resulted in timidity and slowness; Patterson or someone forced on him a requirement that the dies be a suitable size to produce gold dollars of half inch diameter, apparently in conformity with the size-diameter ratio fixed for the double eagle: the lighting was poor in the offices allowed Longacre by the chief coiner; and, on top of this, came noxious fumes from the Assayer's Department; pressure from the chief coiner and director to finish the dies in a hurry because of mounting public demands for the coins; difficulties in hand retouching the tiny original die

produced via reducing lathe from the wax model originally intended for the double eagle; hostility amounting to possible sabotage on the part of Chief Coiner Franklin Peale; and the increased die breakage owing to the unusually high relief intended by Longacre. Hardly suprisingly, a few weeks after he had begun, Longacre's original master dies broke at a critical stage—and he had to start all over again, under increasing pressure of a resentful director and chief coiner.

Somehow, this time he was successful, and the master dies were completed May 7, 1849. The coiner raised working hubs from them and sank the working dies, and on the 8th of May he made about a half dozen Proofs and one thousand business strikes from them. Some were evidently saved as souvenirs, but the rest went into circulation. The dies promptly cracked, and Longacre had to proceed to make a new obverse, slightly modifying some details of the first one . . .

Thus the stage was set for the issuance of the gold dollar. Designed by Longacre, the obverse featured the head of Liberty facing to the left, with LIBERTY inscribed on a beaded coronet. Thirteen stars surrounded. The central motif was obtained by reducing the Liberty head used on the 1849 double eagle, also a new denomination that year.

The reverse of the 1849 gold dollar shows a wreath tied at the bottom with a ribbon and bow, open at the top. (After the initial coinage the wreath was modified slightly to what collectors know as the "closed" type, with wreath ends closer to each other but not touching.) Within the wreath is the denomination expressed as a 1, DOLLAR below, and the date. Surrounding the wreath near the border is the inscription UNITED STATES OF AMERICA. Mintmark issues display the appropriate letter below the wreath ribbon.

Walter Breen pioneered the study of gold dollar varieties, publishing his findings in 1964 as part of Hewitt's Numismatic Information Series. He described several varieties of 1849 issues:

Type I. Small head with coronet point mid-way between two stars. Without designer's initial L on the neck truncation. Reverse with open wreath. Mint files record the issuance of 1,000 business strikes and 6 Proofs, although others may have been made.

Type II. Small head similar to the preceding, but with initial L on the truncation. Reverse with open wreath.

Type III. Large head of the same design as described, but with portrait occupying a greater area of the coin. Reverse with open wreath.

Type IV. Large head as preceding, combined with new closed wreath reverse. Breen notes that the reverse die was "apparently produced by altering a master die of the open wreath type — punching in an extra group of leaves at the top of each branch, so that the new branches end very close to the large numeral 1. Two new pairs of berries were also added, making fifteen in all. Reason for this change is unknown."

Numerous sub-varieties exist of the various types. Today the most often seen obverse style is the large head format.

Measuring but 13 millimeters in diameter, the 1849 gold dollar became the smallest of all United States coin issues. Even the diminutive silver three-cent piece, first issued in 1851, was a millimeter larger.

The tiny size caused wide criticism. Keen eyesight was required to distinguish the features on the coin, and in poor light a gold dollar could be mistaken for a half dime (15.5 millimeters diameter) or, 1851 and later, a silver three-cent piece (14 millimeters). At one point a congressman accused Director Patterson of intentionally producing a coin which would be unpopular with the public, just to stir up a controversy. In July 1851 Patterson retired and was replaced by George N. Eckert (who continued in office until April 1853). The subject of the gold dollar's small diameter was brought to the fore again, and early in 1852 patterns were made of a larger diameter. The earliest pattern issues, of the dollar denomination as well as the half dollar, were produced in a novel way by taking dime and half dime dies respectively and using them to strike perforated planchets, with the results being ringlike coins showing on one side the outer borders of the dime and half dime designs. The purpose in this instance was not to suggest this as a design but, rather, to produce pieces to illustrate the diameter and format.

On January 27, 1852 Eckert wrote to Sen. R. M. T. Hunter:

In reply to your letter of the 17th, I herewith enclose planchets of perforated or annulated [ringlike] dollars and half dollars in gold, with such rude design as was possible without the construction of new dies. The planchets are rather large, and the perforation consequently wider, than I think desirable for the piece, but we were limited by the time and means at our disposal, and have struck them with dime and half dime dies.

Respecting the practicability of such a coinage, I find some difference of opinion among those familiar with the mechanical process of the Mint. None doubt that it can be executed; the only doubt is as to the comparative rapidity with which it can be done . . . If Congress should approve such perforated coins, it seems to me that any law authorizing the issue should not be absolutely obligatory, but defer the matter to the ultimate decision of the President, which could be faithfully given after practical trials and a report from the Mint.

I think any attempt to increase the size of the gold dollar by alloying it is quite impracticable. A very small addition of silver would make, to all appearances, silver coin, so that counterfeiting would be readily accomplished. Copper would create a copper color and be so much worse than silver.

In short, if the present gold dollar is unacceptable, the perforated coin appears the only feasible substitute. Better than all, however, is such an alteration in our laws as would restore silver to the circulation and render such small gold pieces altogether unnecessary.

Later in the year special dies were made for the ing dollar. Of simple design due to space reuirements, there was no portrait or figure. The nscriptions consisted of the date, UNITED TATES OF AMERICA or the abbreviation JSA, and the denomination expressed as OLLAR. These later patterns were made in nree major varieties and many different metallic ariations.

Throughout 1852 and 1853 there was much omplaining about the tiny gold dollar. The proosal of ringlike coins, while solving the diameter roblem, caused its own complaints, mainly ecause the public was not familiar with such a ormat, because standard emblems could not be sed due to space requirements, and because the nusual shape caused difficulties in planchet reparation and striking. In 1853 Eckert was ollowed in the directorship by Thomas M. Pettit, vho served only until May. Perhaps to acquaint ne new director with the problem, Secretary of he Treasury James Guthrie wrote to Pettit on April 19th:

So many complaints have been made about the size of the gold dollar—its liability to be lost or paid through mistakes for small silver coins—that it would seem to be expedient to adopt some other form.

It is understood that a specimen of a gold dollar proposed to be issued with a hole in the center was sometime since submitted to the Department, but if such was the case, it has been lost or mislaid.

Be pleased to take the matter under consideration and submit a design for a ring dollar.

Pettit replied that no specimen of the ring dollar could be found in the Mint, however a silver piece was located and sent. He went on to state that the production of ring coins involved considerable difficulty. He subsequently suggested that a coin with angular edges or even an oval coin would be preferable to the ring format.

On May 31, 1853 Pettit died. Within a few days he was succeeded by James Ross Snowden, who remained in office through April 1861. Secretary of the Treasury Guthrie would not let the matter of the tiny gold dollar drop and on June 7th wrote to the new director:

The Department is very solicitous that the new gold dollar should be put into circulation in a more convenient form than that now in use, and it is hoped that there are artists in the country sufficiently skillful to devise some emblems of liberty which may be impressed on the annular coins in a manner so as to comply substantially with the law.

Secretary of the Treasury Guthrie persisted in his desire for a ring coin, causing periodic defenses from Mint officials. Realizing that there was indeed a problem with the small diameter gold dollar, in May 1854 the Mint prepared samples of a modified design of larger diameter, but of the standard format without a hole and with the figure of Liberty at the center. At the same time it was necessary to restate to Guthrie the difficulties that would be encountered if a ring design were to be used:

The mechanical difficulties in the manufacture of annular coins are not trivial. They do not lie so much in the cutting out of the planchets, as your letter supposes, as in the stamping and throwing off.

We are fully aware that the hole would be of use in another respect than the one already named; that is for tying in bunches of a given number as the Chinese do. It would also be a good mode for distinction by the touch. Against these two considerations, let us place the fact that by cutting out the center the piece is very much weakened, or in plain terms, "its back is broken," and, further, there is no nation on earth, barbarous or civilized, which has thought it worthwhile to make this sort of coin, except the Chinese.

The initial gold dollar style of 13 millimeter diameter was produced from 1849 through 1854. Production was centered at the Philadelphia Mint, with the record yearly production of 4,076,051 occurring in 1853. Examples were also struck at the branch mints at Charlotte, Dahlonega, and New Orleans. Certain of these were produced in limited numbers, including 1850-C (6,966 minted), 1850-D (8,382), 1851-D

(9,882), 1852-C (9,434), 1852-D (6,360), 1853-D (6,583), and the lowest recorded mintage for the type, 1854-D (only 2,935).

The Charlotte Mint gold dollars of 1849 exist with both the open wreath and closed wreath varieties, with the open wreath being particularly elusive. The Dahlonega and New Orleans issues are all of the open wreath format.

As is true of other denominations from the same mints, specimens of Dahlonega and Charlotte gold dollars of all years are apt to show a particular pale yellow coloration due to the impurities in the refined native gold used. There were persistent problems with striking, die wear, and planchet preparation. Apparently little care was given to aesthetic considerations, with the result that even Uncirculated examples seen today are apt to show weaknesses or defects. David Akers, in his *United States Gold Coins, An Analysis of Auction Records, Gold Dollars,* refers to this from time to time. For example, he notes that "as is the case with most Charlotte and Dahlonega gold coins, the 1849-D is often softly struck on the hair, giving the appearance of wear even if there really is none." Of the 1852-C he notes that "like most Charlotte Mint gold dollars, the planchets are often very poor and the dies used also show numerous defects."

During the 1849-1854 years in which the small-diameter gold dollars were struck there were no numismatists interested in mintmark varieties. As the branch mint issues of Charlotte, Dahlonega, and New Orleans were struck far from the area in which most of the few coin collectors at the time lived (in the area from Virginia to New England), the survival of Uncirculated coins is strictly a matter of chance. As a result examples are exceedingly elusive today. Probably no more than a half dozen numismatists saved gold dollars by date at the time, and even this estimate may be on the high side. Desired were simply pieces showing the year, and Philadelphia coins, being the most readily available, neatly filled the bill.

In the summer of 1854 James B. Longacre produced a new gold dollar design. The diameter was enlarged to 15 millimeters, slightly smaller than a half dime, but still significantly larger than the previous gold dollars. The obverse portrait of Liberty was redesigned to an Indian princess wearing a feather headdress. It was modelled in concept after that used on the $3 gold piece (first made in 1854) but details differed considerably. Around the obverse border was the inscription UNITED STATES OF AMERICA.

The reverse consisted of a large and heavy wreath composed of corn, cotton, tobacco, and wheat, after the style used on the $3 gold issue. At the center was the denomination expressed as 1 DOLLAR, and the date. The mintmark on branch mint issues appeared below the wreath. The same wreath style was later used on the flying eagle cents of 1856-1858.

On August 18, 1854 the new format was approved. Coinage for circulation commenced the following day. The Philadelphia Mint produced coins of the new format for the balance of 1854 and all of 1855. In the latter year, 1855, specimens were also struck at Charlotte, Dahlonega, and New Orleans. Gold dollars of the same design were also struck in 1856, but only in San Francisco.

Known as the Type II design by collectors today, this style, produced at Philadelphia for just two years (1854-1855), Charlotte, Dahlonega, and New Orleans for one year (1855) and San Francisco for one year (1856), is the most ephemeral of the major gold dollar styles.

Apparently little thought was given to testing the new design when it was developed by Longacre in the summer of 1854. Unlike the lengthy consideration given to the ring design, which was eventually dropped, the Indian princess style with feathered headdress was translated into dies, and coins were rushed into production. It was obvious that there was a major problem: the portrait of Miss Liberty on the obverse was done in fairly high relief (considering the smallness of the coin). Directly opposite the deepest features of the portrait, on the reverse, were the central letters LL of the inscription DOLLAR and the two central numerals 85 of the date 1854. During the high-speed production process, the die pressure and quantity of metal available were inadequate to fill the deepest recesses of the portrait on the obverse and all of the letters and numerals on the reverse, with the result that nearly all examples were lightly struck in one or both portions. 1854 Type II gold dollars with weaknesses at the reverse center are the rule, not the exception in collections today. The same is true of 1855 issues and of the San Francisco issue of 1856. Writing of one of the issues within

hat group, the 1855, David Akers noted that almost all of them have a very weak 8 in the ate, as well as weakness in LL of DOLLAR. Even everal Proofs that I have seen of this date exibited this weakness." In instances of branch int issues the characteristics of light striking and oor planchet preparation compound the design aw. David Akers notes of the 1855-C:

> Invariably the planchets and the quality of striking are extremely poor, and the date and word DOLLAR are almost always weak. In fact, the 8 is almost missing on some specimens. Many pieces also show distinct clash marks. Because of the poor planchets and equally poor quality of striking, grading is difficult and one must take note of such characteristics as lustre, quality ot the surfaces, etc., in order to make an accurate determination of grade.

The most generous emission of the Type II lesign was the 1854 Philadelphia issue of which 83,943 were made, followed closely by 758,269 t the same mint the following year. The 1855 Charlotte issue was produced to the extent of ony 9,803 pieces. The title of the rarest issue is reerved for 1855-D of which only 1,811 were nade. It is believed that perhaps two dozen to hree dozen totally exist, although at the time he vrote his 1964 study Walter Breen was able to race only 8 specimens.

During the early stages of the present book the uthor considered giving rarity information conerning various gold dollars and other issues in lifferent grades. However, after due considerion it was realized that determination of the umber of higher grade pieces actually in exstence would be impossible as many cataloguers, ven in recent times, have fallen into the illogical osition of grading rarer issues more loosely than ommon issues! Relevant to this is David Akers' omment concerning the 1855-D:

> This is one of the rarest of all gold dollars and it is extremely difficult to find in high grades. Because of its rarity it is generally grossly overgraded, and most specimens that I have seen, including those called AU or even Uncirculated, would barely make Extremely Fine if they had been the more common 1854 Type II or 1855.

Of a given half dozen scarce gold dollars escribed in past auction catalogues as "Uncirulated" how many are really in this grade? hree? One? None? The answers will never be nown for sure, for it is impossible to track down xamples widely scattered in collections and to rade them by accurate present-day standards. It can be assumed, however, that AU, Uncirculated, and even Proof gold coins of various issues are much rarer in actual existence than they are in terms of reports in auction and fixed price catalogues.

The 1855-O gold dollar is the only New Orleans issue of this type and is also the last New Orleans issue of the gold dollar denomination. Fifty-five thousand were struck.

The final issue of the Type II design is the 1856-S. Toward the end of 1855, before a design change was put into effect, dies of the Type II style were prepared at the Philadelphia Mint (where all dies for branch mints are made) and shipped to San Francisco. Six pairs of dies were sent, although apparently not all were used. Today collectors recognize two varieties, one with a "regular" S mintmark and another with a blundered mintmark. In the second variety the mintmark on the die was first punched in an incorrect position, too high and too far to the right, and then was correctly repunched in the proper location. Both varieties are of approximately equal rarity.

Toward the end of 1855 or early in 1856 the Mint realized that the Type II design was unsatisfactory. Problems of weak striking had plagued the entire production run and the need for a change was understood. The obverse was redesigned to an Indian princess with feathered headdress identical to that used on the $3 gold piece, slightly differently styled than that earlier used on the gold dollar, and in shallower relief. Slight changes were made in the strength of other features on the coin. The result was the Type III issue which first appeared in 1856. Although this did not totally eliminate the problem of weak striking, it went a long way toward remedying the defect. After 1856 most examples were sharply struck. Branch mint issues continued to have their problems, but for different reasons. As earlier noted, little attention was paid to planchet quality, proper die spacing, and other considerations at Charlotte and Dahlonega. Weaknesses are mainly due to improper setting of the dies so that the spacing was too wide, causing certain details not to be fully struck up, and to the use of old-style screw presses. In other instances, poor planchet preparation resulted in uneven or inadequate metal distribution on the planchet before the coin was struck. Again, David Akers' commentary is

poignant, this time concerning the 1857 Charlotte dollar, a representative issue:

> The planchets used for striking 1857-C gold dollars were downright atrocious, as was the quality of minting. Even the best specimens look terrible and are very difficult to grade. Once again, one must look at the quality of the surfaces and the mint lustre rather than at the typical grading points that one would examine on say an 1857 [Philadelphia Mint issue]. Because even Uncirculated specimens generally have such a poor appearance, they rarely bring prices that are commensurate with their true rarity.

Gold dollars of the Type III design were produced in an uninterrupted sequence at the Philadelphia Mint from 1856 until 1889. By the latter year, gold dollars were rarely seen in circulation and the usefulness of the denomination as an article of commerce had ended. An act passed by Congress the following year, September 26, 1890, formalized the discontinuation.

In 1856 examples were struck at the Philadelphia and Dahlonega Mints. Philadelphia issues were divided into two varieties. Walter Breen has theorized that 33,660 examples were struck of the variety with the numeral 5 in the date upright, and that 1,729,276 were struck with a slanting or italic 5 in the date. This conjecture, and numerous similar estimates, result from studying daily and monthly production figures at the Mint and then trying to equate known varieties with the production figures based upon rarity. For example, if within a certain coin mintage year a small quantity of an issue was minted in, say, February, and a much larger quantity was minted in, say, July, and if two varieties exist for that date, one scarce and one common, it is theorized that the scarce one was the February mintage. In practice this reasoning is apt to have many flaws. Compounding the problem is the Mint policy of rarely noting when small design differences were made. In the instance of the 1856 gold dollars, David Akers theorizes that the upright 5 variety is five to ten times rarer than the slanting 5 variety, not over 50 times rarer (as the Breen estimate would suggest). Another relevant consideration is that rarity today of a given coin may or may not have anything to do with the mintage, for the existence of hoards, melting of coins, and other factors must be taken into consideration.

The 1856 Dahlonega Mint issue is a rarity. Just 1,460 were coined, and of that number it is believed that just two or three dozen are known to exist today. A hallmark of the issue is the word UNITED of which the U is always weakly struck and is sometimes not present. Interestingly, a similar situation exists for the 1860-D gold dollar. Characteristically the date is also weakly struck on the 1856-D, with the numeral 5 in particular being lightly impressed.

1857 saw gold dollar production at the Philadelphia, Charlotte, and San Francisco mints. Rarest is the Dahlonega issue with 3,533 pieces struck. Most, if not all, examples are lightly defined in certain areas due to striking.

1858 gold dollars were minted at Philadelphia, Dahlonega, and San Francisco. Rarest is the Dahlonega issue with 3,477 minted. The 1858-D is characteristically weakly struck at the date, reminiscent of the Type II problem, with the 85 often missing.

1859 gold dollars were produced at Philadelphia, Charlotte, Dahlonega, and San Francisco. 1859-C (mintage 5,235) and 1859-D (4,952) are characteristically lightly struck.

1860 saw gold dollar production occur at Philadelphia, Dahlonega, and San Francisco. The Dahlonega issue, with only 1,566 struck, is classified as one of the great rarities of the series. Just several dozen are known, most of which are in lower grades. For years the great rarity of the 1860-D has been proclaimed in print, often being equated with the legendary 1861-D. For example, Walter Breen in 1964 estimated that probably fewer than a dozen were known. However, an updated view of the situation suggests that if a branch mint coin is to be compared in rarity to the 1861-D, the 1856-D should get honors as a piece of comparable elusiveness.

1861 marked a turning point in the gold dollar series. After this year production was confined to the Philadelphia Mint with the solitary exception of 1870-S. In 1861 527,499 pieces were struck at Philadelphia. In addition, an unknown quantity emanated from the Dahlonega Mint. The 1861-D, which David Akers notes as the "king of the gold dollars," is probably the best known rarity in the series.

On December 10, 1860 two pairs of 1861-D dies were shipped from Philadelphia. Arriving at the Dahlonega Mint on January 7, 1861, the dies were set aside in anticipation of a federal request for coinage. In the same year the Confederate

tates of America laid claim to all government roperty within its territory, including the harlotte, Dahlonega, and New Orleans mints. he Dahlonega facility was administered by the overnor of Georgia. Although no official ecords can be traced today, apparently $13,345 orth of gold bullion was on hand at the time of e April 8, 1861 seizure. Up to that time no gold ollars had been coined at Dahlonega, and 1,597 5 issues had been produced by the facility. It is elieved that additional $5 pieces were struck ther under the authority of Georgia or the Con-deracy, and all known 1861-D gold dollars ere likewise thus produced. As no mintage ecords for the 1861-D have survived (if indeed y were kept), the number originally struck can nly be estimated. Of the 1856-D gold dollar, a oin of somewhat comparable rarity today, 1,460 ere struck. As the conditions affecting survival f the pieces might have been approximately milar, it is logical to assume that the number roduced of 1861-D was originally in the 1,000 to ,000 range, probably toward the lower end. The bverse die used for coinage was the same used to roduce 1860-D gold dollars and, like the 860-D, the 1861-D was produced with a weakly efined U in UNITED.

Beginning in the 1840s silver became a scarce ommodity in the United States. Exports and ommercial uses consumed more metal than was nined or supplied by imports (primarily from Mexico, where silver was mined in many videspread locations). After 1848 California pro-luced staggering quantities of gold, thus upset-ing the traditional ratio between the yellow and ilver metal. Silver began to trade at a premium, o that in the early 1850s silver coins could be nelted down, and the bullion retrieved would ex-eed the face value. Silver rapidly went into the ands of speculators, melters, and exporters, caus-ng a shortage which was remedied to an extent y the issuance of the silver three-cent piece in 851 (which contained only 75% silver, in con-rast to other denominations which contained 0% silver) and the decrease in authorized veights of silver coins in 1853. During the early 850s, when silver coins were rare in circulation, old dollars were minted in large quantities and vere actively used in commercial and banking hannels. By the end of the 1850s silver coins ecame plentiful once again and gold dollars were eturned to banks and Treasury vaults for storage. In 1860 eight million gold dollars were melted, and the resultant bullion was used for other coinage.

The onset of the Civil War brought with it a renewed distrust of paper money and an increased desire for coins, particularly gold and silver. As a result, the mintage of gold dollars, which on an annual basis had not crossed the half million mark since 1857, climbed in 1861 to 527,499 Philadelphia issues plus a small number of Dahlonega pieces. In 1862 the figure jumped to 1,361,390 Philadelphia Mint coins, the highest figure since 1856. Early in 1862 it was realized that public hoarding was so great that despite vastly increased mintages of the various denominations, the mints simply could not keep pace. Early in the same year payments of gold and silver coins or "specie" were suspended by the Treasury. Gold coins disappeared virtually overnight. Silver lingered for a short time after which it too was gone. Copper-nickel Indian cents, made in huge quantities, were fed into circulation, but these also disappeared virtually as soon as they were issued. Filling the needs of commerce was a flood of unofficial currency items, including encased postage stamps, scrip notes of denominations ranging from one cent to fifty cents or a dollar, and thousands of different cent-size bronze tokens bearing advertising or political inscriptions. Later the federal government issued its own "paper coins" in the form of fractional currency.

After 1862 gold dollar mintages were sharply reduced. 1863 saw 6,250 made, followed by a coinage of 5,950 in 1864, a mintage of 3,725 in 1865, and 7,130 in 1866. At the time of mintage apparently few were released. Rather, they were stored in Treasury vaults, along with other gold and silver coins. In the 1870s specie payments were resumed, and gold dollars minted years earlier were put into circulation. Gold dollar production continued at a low rate, with the 10,000 figure being broken only in one instance (1868 when 10,525 were minted), until 1873 when 125,125 were struck. In the following year, 1874, 198,820 were made. It was thought at the time that gold dollars would become popular in circulation once again, but the public seemed to have forgotten about them, for despite efforts to promote them most coins languished in bank vaults.

Coinage after 1861 was limited to the Philadelphia Mint with the exception of 1870-S

of which 3,000 were made. Interestingly, the 1870-S dollar dies sent to San Francisco from Philadelphia omitted the S mintmark, an error. This situation was rectified in May, 1870 when two gold dollar reverse dies with the proper mintmark were received at San Francisco and the error dies were returned. The occasion for striking the 1870-S gold dollar is not known, but it could have been to observe the new Mint building, the cornerstone of which was laid that year.

Following large Philadelphia Mint coinages in 1873 and 1874, there were enough gold dollars on hand to more than satisfy the needs of commerce. Indeed, the majority of the pieces never circulated due to lack of demand. So, 1875 saw the lowest recorded mintage of the entire series, just 420 coins.

From 1876 through 1889, the year when coinage was discontinued, mintages trended upward, with the last year seeing 30,729 produced. There was a popular speculation in gold dollars at the time with premiums being paid by hoarders. This accounts in part for the increased mintages; however, it is likely that had Treasury vaults been emptied, there would have been more than enough to fill any demands.

Of the Type I dollars minted from 1849 through 1854, slightly over 11.7 million were struck. The Type II design 1854-1855, plus 1856-S, saw a mintage of about 1.7 million, while the Type III design from 1856 onward recorded a production of slightly over 6 million.

From a collecting viewpoint today, the survival of specimens in various grades has little to do with the original mintages. Generally, Uncirculated coins of any Charlotte or Dahlonega issue are exceedingly rare. As noted earlier, the actual rarity is confused by lesser grade pieces having been described as "Uncirculated" in sale literature under the illogical reasoning that more elusive issues should somehow have a different grading standard! New Orleans Mint pieces are likewise elusive in top preservation.

Among Type I dollars, Uncirculated pieces encountered are apt to be Philadelphia issues, for these were made in the largest quantities and had the greatest chance of surviving. Few were actually set aside by collectors, for during the 1849-1854 years there was little numismatic interest. However, hoards, preservation of coins sent to foreign countries, and other considerations resulted in numerous specimens being saved, with the result today that examples of these dates are encountered with some frequency.

Type II gold dollars of the 1854-1855 years, plus 1856-S are rare in Uncirculated grade except for the 1854 and 1855 Philadelphia issues. The latter two can be termed scarce, but the tremendous demand for them for inclusion in type sets has spread the supply so thin that when specimens come on the market, eager competition results. Striking, the problem which resulted in the design change in 1856, is a consistent annoyance with dollars of the Type II format. Sharply struck specimens are rarities in all instances.

Type III gold dollars are of varying degrees of rarity in Uncirculated grade. The Charlotte, Dahlonega, and early San Francisco issues are rarities in this state of preservation. Philadelphia pieces of the 1856 to 1859 years are encountered occasionally and can be termed scarce. Philadelphia issues of the 1860s through 1889 circulated very little, so specimens, when they are found, are more apt to be Uncirculated than not. Indeed, worn specimens are rare! An illustration of this is furnished by the statistics cited by David Akers for 1889 gold dollars. He studied auction appearances over the years and was able to trace 112 Uncirculated pieces but just 32 in worn grades.

Hoarding had a great influence on the survival of later pieces. In 1880 1,636 gold dollars were produced, a low mintage. However, probably 70% to 90% of these were acquired by hoarders, with the result that many were passed on to present day collectors and have survived virtually as minted. The writer once disposed of a hoard of several hundred prooflike Uncirculated gold dollars of the 1879, 1880, and 1881 years, and other hoards have come to light. Still, the fascinatingly low mintage figures of the late gold dollar coinages have made them irresistible to collectors, and there is always a strong demand for them. The effect that hoarding can have on the survival of a coin is vividly illustrated by comparing 1860-D (1,566 minted) with 1880 (1,636 coined). Just two or three dozen specimens are believed to be known of 1860-D, of which perhaps just several would meet present-day strict requirements for the Uncirculated grade. On the other hand, of the 1,636 1880 gold dollars struck,

The Commission met in Philadelphia February 13, 1889, the following *ex officio* commissioners being present: Hon. William Butler, United States judge for the eastern district of Pennsylvania, and Herbert G. Torrey, assayer of the United States assay office at New York.

The committee on counting reported the following coins as reserved at the several mints for the purposes of the Commission:

COINS RESERVED FOR ANNUAL ASSAY, 1889.

Mints.	Number of pieces.		
	Gold.	Silver.	Total.
Philadelphia	456	12,369	12,825
San Francisco	1,807	1,797	3,604
New Orleans	22	6,075	6,097
Total	2,285	20,241	22,526

The result of the annual test as to weight and fineness of the coins of the United States during the calendar year 1888 is exhibited in the following resolution, adopted by the Commission:

Resolved, That the Assay Commission having examined and tested the reserved coins of the several mints for the year 1888, and it appearing that these coins do not differ from the standard fineness and weight by a greater quantity than is allowed by law, the trial is considered satisfactory.

PROPOSED LEGISLATION.

I have the honor to recommend that legislation looking towards the discontinuance of the coinage of the 3 dollar and 1-dollar gold pieces and the 3-cent nickel piece be requested of Congress.

With regard to the 3-dollar gold piece, it may be said that that denomination of coin serves no useful purpose, and that its present coinage is limited to a few proof coins sold at a profit by the Mint, to meet the demands of numismatic societies and coin collectors. There is no demand for it by the business public.

The same objections apply to the 1-dollar gold piece, with the additional ones that it is too small for circulation, and that the few pieces issued annually from the Mint are used almost exclusively for the purpose of ornament.

So long as statutory authority exists to coin this latter denomination, the suspension of its coinage by the Secretary of the Treasury is of doubtful legality. The most he has ever felt warranted in doing was to limit its coinage to pressing demands about the holiday season, and to maintain, unbroken, the series of coin sets sold by the Mint. The very limitation of its coinage leads to favoritism in the distribution of the few pieces struck annually, and to speculation in them.

Section of a page from the 1889 Mint Report. At the top of the page is information relating to the Assay Commission findings after examining specimens set aside for this purpose. At the bottom is discussed proposed legislation for discontinuance of certain coins, including the $3 and $1 gold issues. It is noted that neither of these denominations served a purpose in circulation at the time.

probably at least 1,000 are in existence today, and of that number probably fewer than 50 show any signs of wear.

Traditionally, a "complete" collection of gold dollars has included one of each date and mintmark. The 1849-C open wreath, although it was known earlier in the twentieth century, was not in the limelight until the late 1940s. In 1956 when one appeared in James Kelly's American Numismatic Association convention auction it brought $6000, an unheard of figure at the time, and catapulted the variety into national attention. Louis Eliasberg, whose collection was completed prior to that date, did not consider the variety significant enough to add to his holdings. Today the philosophy concerning the 1849-C open wreath has changed, and it is recognized as an important issue. Fewer than a half dozen are known to exist, including two which came to light in recent years, one in Connecticut and another through a collector who submitted it to the American Numismatic Association for certification.

Varieties of the head size differences of 1849 have generally been ignored by collectors and are not listed in *A Guide Book of United States Coins*, the reference used by most numismatists. Most 1849 Philadelphia coins appearing in auction sales and listings are not identified as to minor varieties. Other differences in the series — recuttings, the doubled mintmark on the 1856-S, and related pieces — are desired by certain specialists but are not in the mainstream of interest.

Forming a field of collecting in itself are various pattern gold dollars, with the annular or ring gold dollars being of exceptional historical significance. These are described in detail in *United States Pattern, Experimental and Trial Pieces*, by Dr. J. Hewitt Judd.

Proof gold dollars were produced at the Philadelphia Mint from 1849 onward, although no examples are known to exist today for 1850, 1851, 1852, or 1853. The initial coinage of 1849 Proofs of the denomination consists of the small head variety without L on the neck truncation, of which Proofs were made on May 7th of the year indicated. One of these was placed in the Mint Cabinet and may be seen today at the Smithsonian Institution. Others have surfaced from time to time.

The estate of James B. Longacre, Mint engraver, was sold in 1870 and contained two 1851 gold dollars described as Proofs. The whereabouts of these cannot be traced today.

While a single Proof 1854 gold dollar of the Type I design has been seen, the only specimens to appear on the market have been the Type II or large size issues, of which approximately a half dozen are known today. Of the 1855 gold dollar, also of the Type II design, fewer than a dozen Proofs can be traced. Beginning in 1856 Proofs were produced in larger numbers, the Proofs of that year being of the slanting 5 variety. It seems reasonable to assume that two or three dozen each were made of 1856, 1857, and 1858. In the latter year, Proof coins were sold to the public for the first time (earlier, one had to have special connections at the Mint). After this time mintages increased sharply. According to Mint figures, 80 Proofs were made in 1859, 154 in 1860, 349 in 1861, 35 in 1862, 50 in 1863 and a like number in 1864, 25 in 1865, 30 in 1866, 50 in 1867, 25 each in 1868 and 1869, 35 in 1870, 30 each in 1871 and 1872, 25 in 1873, 20 each in 1874 and 1875, 45 in 1876, 20 each in 1877 and 1878, 30 in 1879, 36 in 1880, 87 in 1881, 125 in 1882, 207 in 1883, 1,006 in 1884, 1,105 in 1885, 1,016 in 1886, 1,043 in 1887, 1,079 in 1888, and in the last year of coinage, 1889, 1,779 pieces.

Although these mintages would indicate that, for example, 1861 Proof gold dollars are very plentiful today, whereas 1880 Proof gold dollars are great rarities, in actuality the numbers known are subject to several other factors. Apparently the Mint produced Proof coins in specific production runs, rather than striking them on many different intervals as orders were received. Unsold pieces were put on the shelf and distributed as ordered. Often the quantities minted would be optimistic and vast numbers would remain undistributed.

Using the previously mentioned dates, 1861 and 1880, what two authorities, Walter Breen and David Akers, write about them is relevant. Breen notes that fewer than 20 examples of the 1861 Proof dollar can be traced. 1880 Proofs are a different situation entirely. In Breen's words:

> The [Proof gold dollars] of this date are enough to give a conscientious cataloguer or authenticator nightmares, ulcer attacks and premature grey hair. Proofs and many business strikes come from the same dies, and most of the extant business strikes come from brilliantly polished dies on polished blanks! It

follows that anything from mediocre eyesight to poor lighting to sheer venality or unscrupulousness can suffice to induce a dealer or collector to offer his shiny 1880 as a Brilliant Proof without stopping to ask himself if it was intentionally made that way. And it will usually sell so. Auction records are no help . . .

Another interesting comparison can be made with Breen's figures for the 1861 Proof (of which 349 were coined) and the 1862 Proof (of which 35 were coined). For the 1861 he believes that fewer than 20 exist. For the 1862 he believes essentially the same thing: "Fewer than 20, possibly fewer than 15 survive." Obviously if 349 Proof gold dollars were minted in 1861, probably 300 of these went to the melting pot!

David Akers lists the auction records for 19 Proof examples of the 1861 and 31 Proof examples of the 1880, noting that of the 31 "Proofs" offered "it seems likely that many were Uncirculated rather than Proof." As David Akers' figures include reappearances of the same coin at auction, in each instance his statistics are optimistic. It is possible that the 19 Proofs of 1861 may represent a dozen or fewer different actual coins. Comparing 1861 to 1862, David Akers cites 17 auction appearances for Proofs of the latter, verifying that the 1861 Proof mintage in no way reflects the number actually distributed.

In the 1870s and 1880s Proof dies were often used to make business or production strikes, with the result that pieces made for circulation very closely resemble Proofs. In some instances they are virtually indistinguishable, leading to confusion which probably can never be straightened out to everyone's satisfaction.

The abnormally high Proof mintages of gold dollars in the mid and late 1880s is explained by a speculation which occurred at the time. The low business strike mintages of gold dollars were noticed by numismatists, jewellers, and others. Walter Breen reports that Col. A. Loudon Snowden encouraged speculators to buy Proofs at $1.25 each. Many followed the suggestion, ordering them in quantities, often of 25 to 50 pieces, through local banks.

Hoarding of business strike and Proof gold dollars, particularly the 1879-1889 years, was a popular pastime with certain collectors years ago. Walter Breen reports that Lammot DuPont, Horace Louis Philip Brand (Virgil Brand's brother), and Charles E. Green were among them, to which the author can add a prominent 19th-century Baltimore numismatist (who had several thousand pieces), and a western Massachusetts dealer. Probably most have been dispersed by now. Even so, the fascination with hoarding exists, and in more recent times Leon T. Lindheim, a Cleveland (Ohio) banker and coin columnist endeavored to acquire as many Proof 1881 gold dollars as possible. He acquired 54 pieces, some Proofs and some prooflike Uncirculated coins. His collecting efforts in this regard were described in an article in the *Numismatic Scrapbook Magazine*, December 1965.

Today the collecting of gold dollars is approached from several different perspectives. Probably the most popular way is to assemble one representative of each of the three major design types, preferably in the highest possible condition. Other numismatists specialize in issues of the Charlotte or Dahlonega mints. Several have attempted to acquire one each of as many different Philadelphia Mint Proofs as possible, usually meeting with success for the years 1861 onward and intermittent success with earlier specimens. A number of collectors during the past century have endeavored to acquire one of each date and mintmark, and several have succeeded. The limited number of certain rarities has resulted in the formation of many incomplete sets. In some instances one must wait until a fine collection is marketed in order to be able to obtain such landmarks as the 1855-D, 1856-D, 1860-D, and 1861-D, not to overlook the elusive 1875 and the very rare 1849-C with open wreath.

Quarter Eagles

6

In 1790 and 1791 Secretary of the Treasury Alexander Hamilton studied the subject of coinage and proposed a decimal system. However, when the Act of April 2, 1792 was passed the decimal system was adhered to only in part, with gold denominations set at $10, $5, and $2½. Presumably the reason for the $2½ piece, or quarter eagle, came from its location between the highest silver unit, the dollar, and the gold half eagle. The weight was specified as 67.5 grains total, comprising .916⅔ gold mixed with a copper alloy (for hardness and strength).

Patterns, mostly in copper, were made of various denominations at the Mint in 1792. In the following year, 1793, copper cents and half cents were made for circulation. Gold coins were not struck at the time for surety bonds for this purpose had to be furnished by certain mint officials, and this was not done until 1795. In that year gold coinage commenced but was limited to half eagles and eagles.

During the summer of 1796 dies for the quarter eagle denomination were prepared by Robert Scot, Mint engraver since late 1793. It is possible that John Smith Gardner, who worked at the Mint from November 1794 through early 1796, and again in the summer of 1796, may have assisted him. R. W. Julian, who did considerable research in the National Archives, learned that Gardner resigned his position early in 1796 citing several complaints, including insufficient salary. Gardner received $234 for 78 days work during the first quarter of 1796 and $150 for 50 days work ending August 26th of the same year.

At the time bullion deposits at the Mint were irregular, leading to striking of gold denominations at intervals rather than on a continuous basis. The first quarter eagles, 66 in number, were delivered on September 21st. The only other delivery of the denomination in 1796 occurred on December 8th when 897 were ready for distribution.

Two major varieties of 1796-dated quarter eagles exist. Both feature on the obverse the portrait of Miss Liberty facing right, her hair under a turbanlike cap at the top and, below, streaming downward toward her neck. Above is the word LIBERTY, and at the bottom of the obverse appears the date, 1796. The first design type has no stars on the obverse. The second design type has eight stars to the left and eight to the right. Other features of the with-stars dies are different, proving that the variety was not made simply by adding stars to the earlier die. The general style with stars was continued through 1807, although star placement and arrangement varied from time to time. The reverse of all issues 1796-1807 is of the heraldic eagle style, copied from the presidential seal, the first appearance of this general design on a coin. (The 1795-dated half eagle with the heraldic eagle reverse is believed to have been struck in 1798.)

For many years numismatists believed that the 1796 without-stars issue was coined to the extent of just 66 pieces (the delivery of September 21st), and the with-stars issue had a mintage of 897 (the December 8th delivery). On January 14, 1797, 432 quarter eagles were delivered. Numismatists today believe that these 1797-delivered pieces were dated 1796 and comprised the with-stars type. If this logic is valid, then the total mintage of the without-stars variety is 963 (consisting of both deliveries made in the 1796 year), and the with-stars variety, 432.

The preparation of two 1796-dated dies indicates that an extensive coinage was contemplated for the year. However, bullion shortages prevented this.

Today several dozen examples are known of the 1796 without-stars variety. Although the low number remaining makes the coin rare in its own right, its desirability is compounded by its status as the only quarter eagle of its design type — without obverse stars — thus making it a necessity to complete a gold type set. (On the other hand, a numismatist desiring an example of the capped bust to right obverse with heraldic eagle reverse, with obverse stars, has a choice of many different issues from 1796 through 1807.)

The 1796 with-stars variety is considerably more elusive, and only about two dozen can be traced with certainty. The comparative numbers known of the two major 1796 varieties seem to indicate that the mintage figures of 963 and 432 are realistic. It should be remembered, however, that the assigning of specific mintage figures to design types is strictly a matter of guesswork, for the Mint kept few records on the subject. It is always possible, for example, that the delivery of 897 quarter eagles on December 8, 1796 did not consist entirely of without-stars coins. It could have been a combination of the two design types (possibilities concerning mixed mintages, which to the present writer seem logical, have generally been overlooked by earlier writers in such analyses).

Of the 1797-dated quarter eagle it is believed that just 427 were minted. All are from the same pair of dies. The obverse on every specimen seen shows a heavy diebreak extending from the Y in LIBERTY downward through the final star to the border. From this year through the discontinuation of the type in 1807 all dies have just 13 stars on the obverse, although they are arranged in different combinations (seven left and six right, eight left and five right, and six left and seven right).

In 1798, 614 quarter eagles were struck at the Mint. During the following year, 1799, 480 were produced. As no 1799-dated quarter eagles are known to exist, it is believed that the 480 pieces were dated 1798, making the total 1798-dated mintage 1,094 pieces. Coinage was accomplished from two pairs of dies, both with obverse stars arranged six to the left and seven to the right (unlike the arrangement used on any other year of this type). During this period the same number, letter, star, and other detail punches used to make quarter eagle dies were also used to make dime dies. Both denominations are of similar diameter.

Apparently a quarter eagle mintage was contemplated for 1801 but never materialized, for the unused die was overpunched with a 2 digit, thus creating the 1802/1 overdate variety. 2,612 quarter eagles were struck in 1802, and 423 were minted in 1803. As no 1803-dated quarter eagles are known, it is presumed that all are from the single overdate die used in 1802. The total mintage is thus 3,035. Several different reverse die varieties exist.

The 1804 quarter eagle, of which 3,327 were minted, is one of the most interesting issues of the denomination. Two reverse dies were employed with a single obverse, one reverse having 13 stars and the other having 14 stars. The 14-star reverse die was also used to coin dimes the same year, creating an unusual situation in which a single die was used to make regular-issue coins of two different denominations.

In 1805, mintage of quarter eagles amounted to 1,781 pieces, all from a single pair of dies. In the following year, 1806, 1,616 quarter eagles were struck. Both were made from overdated dies. The 1806/4 was produced by cutting the digit 6 over the 4 on a previously-unused die. The 1806/5 overdate was produced by using the same die which produced 1805 quarter eagles and recutting the last numeral. The latter situation is quite unusual among American overdates in various series, for nearly all overdates were made from unused dies. To employ a previously-used die involved annealing the die so as to render the steel softer, then hardening it before coinage reuse. It was far simpler to continue using the earlier-dated die in its nonoverdated form the next year, for at the time little concern was given to using dies in the year dated. On the other hand, an unused die from an earlier year which had not been hardened could be altered simply by punching a numeral over the last digit, and this was done on many different occasions.

It is relevant to mention that 1806/5 quarter and half dollar overdates were, like the 1806/5 quarter eagles, made from used 1805 dies.

The 1806/4 die has the obverse stars arranged eight left and five right, while on the 1806/5 the stars are arranged seven left and six right. Walter

Green has theorized that 1,136 were made of the former and 480 of the latter.

The 1806/5 is one of the great rarities in the quarter eagle series. Fewer than a dozen specimens are known to exist, thus placing it on a par with the famous 1841.

The final quarter eagle of the 1796-1807 type, the 1807, was struck to the extent of 6,812 pieces and today is the date most often seen.

In 1808 the quarter eagle was redesigned. The obverse and reverse were styled after a new half eagle design first introduced in 1807. John Reich is believed to have cut the dies.

Reich, a German immigrant, was first employed by the Mint in 1801 when President Thomas Jefferson saw examples of his work and recommended him to Director Elias Boudinot. Reich was utilized on a part-time basis until April 1, 1807 when he joined the Mint staff as a replacement for Robert Scot, as a letter dated March 25, 1807 from the new director, Robert Patterson, to Jefferson indicates:

> Our present Engraver, Mr. Scot, although indeed a meritorious and faithful officer, is yet so far advanced in life that he cannot very long be expected to continue his labors. In the event of his sickness or death, the business of the institution would probably be stopped for some time, since few if any one could be found qualified to supply his place, except Mr. Reich, an artist with whose talents, I presume, you are not unacquainted, and this gentleman, not finding business here sufficient for his support, is I understand, about to remove to Europe. A small salary would, however, retain him in the country, and secure his services to the Mint. And, in truth, the beauty of our coins would be greatly improved by the assistance of his masterly hand.
>
> An assistant engraver was formerly employed by Mr. Rittenhouse, and by Mr. DeSaussure—and with your approbation, sir, I would immediately employ Mr. Reich in that capacity. He is willing, for the present, to accept of the moderate compensation of six hundred dollars per annum; and should this gentleman be employed, perhaps more than his salary would be saved to the public, in what is usually expended on the engraving of dies for medals, but which might then be executed by an artist in their own service, with little or no additional expense.

One of Reich's first duties was to prepare new dies for silver and gold coinage, resulting in the new half dollar and half eagle designs which appeared in the same year (and subsequently on other denominations).

As used on the quarter eagle, Reich's design consists of the draped bust of Miss Liberty facing left, her hair enclosed in a loose cap. Seven stars appear to the left and six to the right. The date 1808 is below. The reverse employs the motif of an eagle perched, holding an olive branch and arrows, with UNITED STATES OF AMERICA surrounding, the motto E PLURIBUS UNUM above the eagle's head, and the denomination expressed as 2½ D. below. The diameter is 20 millimeters, the same as used since 1796.

After 1808 there was a coinage lapse and no quarter eagles were minted until 1821, when a modified design was instituted. The 1808 thus is the only quarter eagle of its design type. The mintage of 2,710 pieces would indicate a rare piece in any event, but the desirability of the coin has been sharply compounded by its only-year-of-type status. To complete a United States type set an 1808 quarter eagle must necessarily be included.

In 1821 mintage of the quarter eagle resumed. Reich's capped bust to left style was retained, but the features were modified. The diameter was reduced to approximately 18.5 millimeters, the portrait on the obverse was diminished in size, and the 13 stars, instead of appearing seven to the left and six to the right, now circled the portrait except for the date area. Other features were also reduced in size or changed slightly. This design was continued through 1834, although a slight modification occurred in 1832 when the relief on the portrait was raised slightly and certain minute hair details were changed.

The interrupted span of quarter eagle mintage 1821-1834 contains some of the greatest rarities in the American gold series. Minted were the following varieties: 1821, 1824/1 overdate, 1825, 1826, 1827, 1829, 1830, 1831, 1832, 1833, and 1834. Reported mintages range from a low of 760 for the 1826 to 6,448 for the 1821 but are not a true guide to rarity, for apparently many of the pieces were exported or melted. For example, in his study of the series, David Akers noted the same number of auction appearances, 34, for both 1821 and 1826. It is believed that the vast majority of quarter eagle and half eagle coinage from the 1820s and early 1830s was melted or was never released and went to the melting pot following the coinage revision of 1834.

The 1834 issue, known by collectors today as the "with motto" type (for later in 1834 the motto

was discontinued), stands today as the rarest date of the type. Although 4,000 pieces were reported to have been minted, nearly all of them must have been destroyed. When James Ross Snowden, director of the Mint, studied production figures for his *Mint Manual* (published 1860) he was able to ascertain no record that these pieces were ever released for circulation. At the time the melt-down value of each quarter eagle was $2.66, so any pieces distributed would have immediately gone to speculators and bullion dealers for they could not have effectively circulated. Of the fewer than one dozen known specimens, several are Proofs or impaired Proofs. Apparently just a handful of business strikes left the Mint.

By early 1834 gold coins were not to be seen in circulation. As noted, the face value was below the intrinsic value, and bankers, bullion dealers, and others hoarded or melted pieces as soon as they were acquired. Currency in circulation consisted of a hodge-podge of privately-issued tokens (some of large cent size, known today as Hard Times tokens), a flood of banknotes (many of which were issued by banks of dubious financial standing or were counterfeit), foreign coins, and regular-issue United States coins, primarily cents and half dollars. The Act of June 28, 1834 reduced the weight of the quarter eagle from the 67.5 grain standard set in 1792 to 64.5 grains. The fineness of the metal was also reduced slightly. To differentiate the new lightweight coins from the heavier pieces already coined in 1834, the secretary of the Treasury recommended that the new pieces bear the date August 1, 1834, a curious and unprecedented request. However, it was decided that the portrait would be redesigned and, as an obvious mark of distinction, the motto E PLURIBUS UNUM would be omitted from the reverse.

A letter from Mint director Samuel Moore to Secretary of the Treasury Levi Woodbury, July 9, 1834, states the situation (as quoted by Walter Breen in *Varieties of United States Quarter Eagles*):

> . . . in regard to your suggestion of affixing to the gold coined after the 31st inst., the date of the month, to designate the new coins from others of the current year, I have respectfully to observe: that for such designation, the engraver has been ordered to execute new dies, omitting the motto . . . and substituting a new head of Liberty without the dress-cap, the hair being only restrained by the cincture inscribed LIBERTY.
>
> The above motto [E PLURIBUS UNUM] has no authority in law or good taste, as the inscription UNITED STATES OF AMERICA expresses the same fact. It is not known at whose instance it was introduced; our earliest coins lack it. It has long been felt as an encumbrance.

Interestingly, in Rutherfordton, North Carolina, private gold coiner Christopher Bechtler, desiring to comply to the fullest extent with what he perceived as Treasury Department policies, added the date August 1, 1834 to his half eagles.

It was William Kneass, Mint engraver, who designed the new coin. The obverse head of Liberty was redesigned to that of a woman with loose and flowing hair, with the word LIBERTY on a ribbon headband. Otherwise the general appearance of the obverse and reverse remained the same, but with E PLURIBUS UNUM deleted. The diameter was reduced slightly to about 18.2 millimeters. Known as the *Classic Head* style by collectors today, the design was continued in use through 1839. Two varieties exist of the 1834, one with a small head and the other with a "normal" size portrait. The small head variety is distinguished by having the outlines of the curls on top of the head less pronounced than on the larger head style and by having compact curls at the top of the head and at the back, those at the back being in almost a straight line.

William Kneass, who prepared the dies, was appointed to the position of chief engraver of the United States Mint, the second person to hold that post, at a salary of $2,000 per year, on January 29, 1824. Born in Lancaster, Pennsylvania, in September 1781, Kneass engaged in engraving as a career, doing book illustrations and other work. Before he was appointed to the Mint position he maintained a business office on Fourth Street, above Chestnut Street, Philadelphia, which according to George G. Evans (in his *Illustrated History of the United States Mint*) "was a well-known rendezvous for the leading wits and men of culture, for which Philadelphia was then eminent."

Kneass did not have the opportunity to participate in any radical coinage changes, so his name is not particularly remembered today except in association with the 1834 gold coinage, pattern half dollars of 1838, and a few other pieces. Kneass died on August 27, 1840, after which the engravership passed to Christian Gobrecht, who earlier was his assistant.

In 1835 the portrait was slightly redesigned, esulting in an effigy which some have haracterized as "taller" than those used in 1834. he following year, 1836, saw coinage employng three portraits, each slightly different from ne other, described by Walter Breen as being Head of 1834, apparently from the same punch s the ['normal'] head coins, the Head of 1835, nd the Head of 1837."

In 1838 the obverse portrait was again nodified slightly. This was a period of change nd modification at the Mint, and in this era imilar portrait adjustments can be found on other enominations such as cents and half dollars. In ne same year, 1838, the first branch mint quarter agle was produced at the Charlotte Mint, the 838-C. The mintmark on this and subsequent nintmarked issues in the Classic Head series apears on the obverse above the date. Charlotte ontinued to produce quarter eagles until operaions were terminated by the Civil War in 1860. During the same year dies were sent to the Dahlonega Mint, but apparently no coinage naterialized.

1839, the last year of the Classic Head style, aw production of quarter eagles at Philadelphia, Charlotte, Dahlonega, and New Orleans. The 839 Philadelphia issues are overdates, 1839/8. The Charlotte issues occur in two forms, an overlate, 1839/8-C, and a variety with the last two digits in the date sharply recut. All Dahlonega ssues are overdates, 1839/8-D. The overdating was undoubtedly done as a matter of Mint economy. The discontinuation of the Classic Head style was imminent (the $5 and $10 had already been changed to the *Coronet* style), so it was deemed expedient to overdate several unused 1838 dies, rather than to spend the time to reate new 1839 ones.

The mintage of Classic Head quarter eagles anges from a high of 547,986 effected in 1836 to low of 7,880 for 1838-C, the latter being the arest issue of the type. During the first three years of the no-motto design, 1834 through 1836, 791,622 pieces were produced, a figure approxmately equal to the total of the quarter eagle nintage for the entire following decade. In the half eagle series, the only other gold denominaion minted during the mid 1830s, a similar surge occurred, explained by great deposits made at the Mint by bullion dealers who had melted earlier coinage for a profit, by the Mint's own melting of unreleased pieces, and by a large shipment of gold to the United States by France.

In 1840 the so-called *Coronet* design appeared. The obverse head was restyled to show Miss Liberty with a more compact hairdo, with a coronet inscribed LIBERTY in place of the former headband, and with the back of her hair tied with a beaded cord. The proportions of the reverse were likewise modified, although the same general design remained in effect. The diameter was reduced to 18 millimeters, which remained constant until the discontinuation of the denomination in 1929.

The work of Christian Gobrecht, assistant to Kneass at the time, the Coronet design is related to that used earlier on cents, half eagles, and eagles. No patterns for the general motif are known.

The Coronet style remained essentially unchanged and was minted continuously from 1840 through 1907, the longest span for an unrevised design of any coin in American history. Some minor detail changes, hardly noticeable, were made to the reverse in 1859.

In 1840 quarter eagles were struck at Philadelphia, Charlotte, Dahlonega, and New Orleans. Branch mint issues from this date forward were identified by mint letters on the reverse below the eagle. Coinage at Charlotte and Dahlonega was effected on old-style screw presses, unlike the modern steam equipment in use at Philadelphia, so resultant coins of the era show numerous weaknesses, irregularities of striking, and other defects. Gold used at these two branch mints has a pale yellow color due to imperfect alloying.

In 1841 quarter eagles were struck at Philadelphia, Charlotte, and Dahlonega. The Philadelphia issue is one of the legendary rarities of American coinage. Occasionally called the "Little Princess" by cataloguers, the appearance of an example in a sale has lent a special cachet to the event. For years it was believed that no 1841 Philadelphia quarter eagles existed and that mintage was limited to Charlotte and Dahlonega pieces. The example in the Mint Cabinet was publicized around the turn of the century, and after that time collectors began to take notice of the variety. No Philadelphia production is listed in the mintage records, so perhaps coinage was limited to Proofs struck for presentation. The dozen or so known specimens are either Proofs

impaired Proofs, or are well circulated. No example has been seen which displays mint frost. David Akers, who notes that the issue is considered to be the most desirable of all Liberty head [Coronet style] quarter eagles, takes a differing view, as expressed in his *United States Gold Coins, An Analysis of Auction Records:*

> There is no official record of this date [Philadelphia Mint issue] having been struck, but obviously a small number were minted. Most numismatists and cataloguers feel that this is a Proof-only date and that all known specimens were originally struck in Proof for inclusion in presentation sets. This seems unlikely to me, and I am not convinced that 1841 is a Proof-only date. First of all, there are far too many specimens known when compared to other Proof quarter eagles (or Proof gold of any other denomination) of the same period. Less than five Proofs are known of every other quarter eagle from 1840 to 1848, and yet I would estimate that at least 12 and possibly as many as 15 1841s are known. Only a few of them are clearly and unequivocally Proofs, such as the coin in the Smithsonian Institution, the piece in Louis Eliasberg's collection, the Davis-Graves coin, and perhaps one or two others. Most others are well circulated and, in fact, grade from Very Good to Extremely Fine. More importantly, the supposedly "impaired Proofs" just don't look like impaired Proofs. Consider for example the Wolfson specimen, which was subsequently in the Shuford Sale and then in the 1974 NASC Sale conducted by the American Auction Association [Bowers and Ruddy Galleries]. Although barely circulated, it has almost no trace of a Proof surface and few of the other characteristics of a genuine Proof (such as a square edge), although it does appear to have been struck from the same dies as the Proofs.

In a footnote David Akers makes a seemingly contradictory comment:

> All known specimens of the 1841 were apparently struck from the same dies. Since some pieces are obviously Proofs, this would normally indicate that they were *all* struck as Proofs since I know of no other non-Proof gold coins of any denomination or date that were struck from the same dies as the Proofs of the same year. [Without belaboring the subject we note that Walter Breen has a differing opinion; for example, concerning 1880 gold dollars he specifically notes that "Proofs and many business strikes come from the same dies," and there are other examples.]

The 1841 Charlotte and Dahlonega issues are scarce (mintage 10,281 and 4,164 respectively), in keeping with the relatively low production from these two mints during the era. The Philadelphia Mint quarter eagles of the period have the reeding on the edge more closely spaced than do the branch mint issues; this, plus obvious differences in striking characteristics and in gold col-

or, have served to expose the occasional 1841 "Philadelphia" quarter eagle made by removing a C or D mintmark.

Strictly Uncirculated quarter eagles of the period are exceedingly rare. Survival of Mint State examples was strictly a matter of chance, and apparently the chance did not occur often. In studying the quarter eagle series carefully, David Akers was not able to find a single example of the 1840, the first year of issue, which he could call strictly Uncirculated or "anything even really close." Thus, when the Uncirculated Garrett Collection coin surfaced and was offered at auction in 1980, fierce bidding competition resulted, and a record price was established. Quarter eagles in the 1840s which are common or only slightly scarce in circulated grade are apt to be great rarities in Mint State. The same situation occurs for coins dated in the 1850s and early 1860s.

By the late 1850s, when interest in coin collecting mushroomed, the Mint was issuing Proofs, so collectors desiring current quarter eagles (and other denominations) ignored Uncirculated coins in favor of Proofs, for it was considered at the time that these were "better" than Mint State pieces. Today the philosophy has changed, and collectors consider Proof to be a different method of manufacture (as indeed it is in a way), and a Proof coin to be *different* from an Uncirculated coin, rather than a *better* coin.

Throughout the 1840s quarter eagles were produced each year at the Dahlonega Mint, each year except 1845 at the Charlotte Mint, and occasionally at the New Orleans Mint. In 1843 recognized varieties were created by date sizes and by the appearance or absence of a serif on the crossbar of the 4. Thus for 1843-C there is the small date, crosslet 4 variety and the large date, plain 4 variety. The same two varieties occur for New Orleans issues. The Philadelphia issue comes just one way, the large date, plain 4 style, and the Dahlonega issue also comes just one way, but in the small date, crosslet 4 format. Quantities minted were erratic during the decade, with particularly large quantities chalked up for 1843 (Philadelphia), 1843-O, and 1847-O. The lowest recorded mintage for a regular issue is the 2,823 figure posted for Philadelphia 1842, with the rarer 1841 having no listed mintage figure, as noted earlier.

In 1848 there was struck at the Philadelphia

ESTIMATE PRICE | SELLING PRICE

THE EXCESSIVELY RARE 1841 QUARTER EAGLE

1189—The 1841 Quarter Eagle of the Philadephia Mint is one of the outstanding rarities in Numismatics. According to the mint records, no quarter eagles were minted in Philadelphia in 1841, but apparently a few were struck for private collections. In his Official List published in 1909, the famed and well-versed numismatist, Edgar H. Adams, stated that he knew of only two specimens of this coin. One was in the Mitchelson collection which subsequently became the property of the State of Connecticut. The other is in the United States Mint Collection. Naturally these 2 coins are out of the market for all time and not available to private collectors.

Since Mr. Adams published his list, four or five specimens have been discovered and one was reported sold in 1930 for $3000.00.

In our great auction of the World's Greatest Collection we experienced a thrill of a lifetime when the Proof 1841 (Lot 108 of that sale) was put on the block. Naturally this coin was one upon which considerable attention was centered and when it finally came up for sale, one could sense the tense feeling of anticipation which seemed to grip the audience which filled the sales room of the Numismatic Gallery.

One of our leading collectors had come in from the Middle West and sat with me for 2 days trying to determine what price to pay for this coin. Finally, as sale time approached, he asked me to handle his bid up to $3000.00, stating that if it went higher he would be on the floor and possibly go to $3500.00. The highest outside book-bid received by us was only $2000.00 and this $3000.00 bid necessitated an opening of $2100.00. An Eastern collector, then on a Florida vacation, had authorized a New York dealer to bid for him. Another collector also gave me the nod that he was bidding—$100.00 at a time it went; 2200-23-24-25 to $3000.00. I had reached my limit—but not our other two bidders. The next bid came from the dealer-representative—$3250.00.

A slight hesitation and our Midwestern collector lifted his eyes—a slight nod—then a fixed look directly at me. He wanted that coin—and $3500.00 was the bid—$3750.00 and $4000.00. The hush was broken by a murmur through the crowd that was not to be silent until, $250.00 at a time, the bidding proceeded to $4500.00, to $5000.00, to $5500.00, and finally to $6000.00, and it was sold to the man who told me to represent him up to $3000.00. A record price for this coin? Yes, but the story goes just one step further.

When our vacationer-in-Florida heard that his representative stopped at $5750.00 he telephoned to our offices. How come? What happened? etc., etc. Finally—"Offer the buyer $7000.00. I want that 1841." The reply was, "It wasn't for sale at $10,000.00."

Only at a public auction can one experience such a thrill. As for us—we are grateful and consider ourselves fortunate indeed that the thrill that comes "once in a lifetime" is now again a possibility.

This excessively rare gem is the only other proof that is known. Outside of these two, only one other 1841 has been sold at auction in recent years—the Dunham specimen in 1941—and that was catalogued as extremely fine.

While this magnificent coin may now go far beyond any of its records, we will base our estimate on our sale described above $6000.00

Description of the 1841 quarter eagle from the sale of the Adolphe Menjou Collection held by Numismatic Gallery (Abe Kosoff and Abner Kreisberg), June 1950

Mint America's first commemorative coin, although at the time it was not designated as such. Made from California gold, the piece was of the regular design but with CAL. stamped on the reverse above the eagle's head.

During the autumn and winter of 1848 "gold fever" was sweeping the eastern part of the United States. Immense fortunes awaited travellers to California, it was stated, and newspaper and other accounts told of vast riches available to those who journeyed west. Lacking actual facts, the writers of many, if not most, stories improvised, taking a scrap of information and embellishing it with fanciful details. The extent of the discoveries was hard to determine from the vantage of an Easterner, and some doubted that there were discoveries at all. The arrival of real gold from California dispelled doubts and set the stage for the mass migration to the Pacific in 1849.

The first deposit of California gold was presented at the Philadelphia Mint by David Garter on December 8, 1848. Mint Director Robert M. Patterson reported that the 1,804.59 ounces assayed at slightly over $18 per ounce value.

The following day, December 9th, a deposit of 228 ounces of gold was received from Col. Richard B. Manson, Jr., of California. After assaying, the gold was reported to average .894 fine. The metal had been purchased in California at $10 per ounce under the sanction of the acting governor, using money from a civil fund. Lieutenant Lucien Loeser, messenger, carried the gold from California to Washington. Soon after his arrival in the capital the *Washington Union* reported:

> We readily admit that the account so nearly approached the miraculous that we were relieved by the evidence of our own senses on the subject. The specimens have all the appearance of the native gold we had seen from the mines of North Carolina and Virginia; and we are informed that the Secretary will send the small chest of gold to the Mint, to be melted into coin and bars, and most of it to be subsequently fashioned into medals commemorative of the heroism and valor of our officers. Several of the other specimens he will retain for the present in the War Office as found in California in the form of lumps, scales, and sand; the last named being of different hues, from bright yellow to black, without much appearance of gold. However skeptical any man may have been, we defy him to doubt that if the quantity of such specimens as these be as great as has been represented, the value of gold in California must be greater than has been hitherto discovered in the old or new continent; and that great as may be the immigration to this new El Dorado, the frugal and industrious will be amply repaid for their enterprise and toil.

The gold was subsequently sent by Secretary of War W. L. Marcy from Washington to Philadelphia via a Lieutenant Colonel Cooper, who delivered the metal to Robert M. Patterson, director of the Mint. The message of transmittal follows:

> I have received several specimens of the gold recently discovered in California, and Lieutenant Colonel Cooper, who is the bearer of this letter, will place in your hands a quantity of this metal for the purpose of having it assayed. As doubts exist in the minds of some as to its being gold, I hope it will be in your power to evolve them at once and furnish me, through him, with the result of your examination as far as respects its genuineness. You will consult your convenience in presenting a more full and particular report but I desire it at an early period.
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> I have not the means of ascertaining the exact weight of the specimen sent. The large quantity — that in the caddy — is a collection from the various localities where the metal is found. The note which accompanies it states its weight to be 230 ounces 15 pennyweights and 9 grains, but I presume it will be found to fall short of that quantity, as some of the finer particles have sifted out notwithstanding the pains taken to guard against loss. In order to have a specimen of it here, I request to deliver one pound of it, or about that quantity, to Colonel Cooper to bring back.
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> If the metal is found to be pure gold, as I doubt not that it will be, I request you to reserve enough of it for the two medals ordered by Congress and not yet completed, and the remainder, with the exception of one or two small bars, I wish to have coined and sent with the bars to this Department. As many may desire to procure specimens of coin made of the California gold, by exchanging other coin for it, I would suggest that it be made into quarter eagles with a distinguishing mark on each, if any variation from the ordinary issues from the Mint would be proper and could be conveniently made . . .

The two medals referred to, one designated for presentation to Major General Winfield Scott and the other to Major General Zachary Taylor, were subsequently struck from other bullion. It is believed that the quarter eagles with the distinguishing mark "CAL." were produced toward the end of December 1848. On January 5, 1849, Director Patterson wrote to Marcy explaining that delays had been encountered during the refining of the metal (in order to separate from it an excess amount of silver as an impurity) and by stamping the letters CAL. on the reverse. It was stated that the gold totalled $3910.10 in value and that payment from the Mint would be made

the form of $3474.64 in coins and $435.46 in wo bars of gold. Assuming that the $3474.64 nount was converted in its entirety to quarter agles, which seems probable, the bullion yielded mintage of 1,389 specimens. The Mint production records show a total coinage of 8,886 quarter agles during 1848, of which 2,759 were produced in December. It is believed that the latter gure included a maximum of 1,389 with the istinguishing counterstamp.

The 1848 CAL. quarter eagle, the smallest enomination United States gold coin at the time he gold dollar did not make its appearance until e following year, 1849), thus became the first ommemorative coin issued by the United States. lthough it is not known how many citizens vished "to procure specimens made with Califoria gold, by exchanging other coin for it," probbly at least several dozen were distributed this vay. Some have full or nearly full prooflike suraces and have from time to time been catalogued s Proofs. As the vast majority of known pecimens show wear, it is likely that most pieces vere released into circulation to serve in the chanels of commerce. Today, probably between 50 nd 100 examples are known in various states of preservation.

During the 1850s quarter eagles were produced t the Philadelphia Mint each year and at Charlotte, Dahlonega, and New Orleans during most but not all years. The Charlotte and Dahlonega mintages in particular were generally ow, with only 874 examples produced of the most elusive, the 1856-D.

In 1854 quarter eagles were struck at the San Francisco Mint for the first time. Only 246 pieces were produced, making 1854-S one of the prime arities in the series. Only about a dozen specimens are known to exist, and most of these are well worn. The reason for the low mintage is not known. Perhaps concentration was placed on producing as much gold in coinage form as possible, so larger denominations were emphasized. The mintages of the 1854-S $10 and $20 are generous: 123,826 and 141,468 respectively, as compared to just 246 quarter eagles and 268 half eagles. On the other hand, 14,632 gold dollars were struck.

Although Uncirculated examples of Philadelphia Mint issues occasionally are seen in the numismatic marketplace, similarly graded specimens of branch mint issues are for the most part great rarities.

In 1859 the reverse die was slightly modified by making the letters smaller and more widely spaced and reducing the size of the arrowheads. Other minor features were also changed. San Francisco Mint quarter eagles from 1860 through 1877 are exceptions and utilize the old-style reverse of the 1840-1858 format.

Coinage of quarter eagles during the 1860s is characterized by an interesting situation. With the exception of the earlier years, Philadelphia Mint production was very small, while San Francisco production was extremely generous. The most dramatic example of this is 1863. Only 30 pieces were produced at Philadelphia, all Proofs. No business strikes were coined. In San Francisco 10,800 were made. In 1865 1,545 Philadelphia issues compare to 23,376 made in San Francisco.

The Dahlonega and Charlotte mints ceased operation in 1861, with the last Dahlonega quarter eagle produced in 1859 and the last Charlotte coin of the same denomination in 1860. In 1861 dies were sent to Dahlonega and Charlotte, but so far as is known they were never used. Following the suspension of specie payments during the Civil War in 1862 (payments were not resumed until the 1870s), quarter eagles were hoarded or melted. At one time, when the outcome of the conflict was uncertain, gold coins were worth nearly 2½ times their value in paper money. Stated another way, a quarter eagle was worth over $6 in greenbacks. The hoarding situation seems to have been less severe on the West Coast, for California was separated from the war and currency remained more stable.

Harry X Boosel, the well-known Chicago numismatist, was fascinated with coinage of the year 1873 and did extensive studies of the various denominations. His findings, published in *The Numismatic Scrapbook Magazine*, disclose that early in the year most denominations were produced with a "closed" 3 in the date. At quick glance the numeral 3 looked like an 8, thus causing confusion. The numeral was subsequently changed to the open 3 style. As Proofs of various denominations were made from dies prepared earlier in the year, they have the closed 3 configuration.

Throughout the 1870s coinage was accomplished at the Philadelphia and San Francisco

mints, except in 1874 when no San Francisco coins were produced. In many instances the western coinage far exceeded the eastern production.

After 1879 branch mint coinage of quarter eagles was discontinued, and the remainder of the Coronet style pieces were coined only at Philadelphia. From a low of just 691 coins (including 51 Proofs) in 1881, mintages trended upward so that by the discontinuation of the type in 1907 the annual production stood at 336,448. Quarter eagles from the 1880s onward circulated very little. Most were stored by banks or by the Treasury Department. As a result, circulated pieces of many issues are rarer than Uncirculated examples. Following the 1907 production, coinage of the Coronet type was suspended, after 68 years of continuous issuance of the same basic type.

In December 1908 an article by Howland Wood, published in *The Numismatist*, caught collectors by surprise. Gone was the traditional Coronet quarter eagle (and half eagle), and in its place was a style unfamiliar, both as to design and general format. In Wood's words:

> The new gold half and quarter eagles are out. To most people these came unheralded and with very little warning. The public press has very little to say about them although they depart much more from the accepted standards than the Saint-Gaudens' pieces did.
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> The chief departure from the world's accepted standard of how money should be made is the treatment of the background or field. Heretofore, the field of the coin has been the most depressed part, while the design has stood out in more or less greater relief. On these new coins the background has become the foreground and now is on the same plane with the highest part of the relief. The design is formed by countersinking into the field. This design is in relief as in other coins but is differentiated from the background by an incuse line, the shape of which follows the outline of the relief. The idea of depressing the design below the face of the coin originated with Dr. William S. Bigelow of Boston, who commissioned Mr. Bela L. Pratt, a noted Boston sculptor, to make the designs. These designs were submitted to Washington and were accepted several months ago.

Frank A. Leach, a Californian who served as director of the Mint from September 1907 through November 1909 (one of the most dynamic periods of change in United States coinage design history), gave his memories of the 1908 coinage event in a book, *Recollections of a Newspaperman*, published in 1917:

> Originally it was the intention to give the $5 and $2.50 pieces the same design as that used on the double eagle or $20 piece, but before final action to that end was taken President Roosevelt invited me to lunch with him at the White House. His purpose was to have me meet Dr. William Sturgis Bigelow of Boston, a lover of art and a friend of the President, who was showing great interest in the undertaking for improving the appearance of American coins, and who had a new design for the smaller gold coins. It was his idea that the commercial needs of the country required coins that would "stack" evenly, and that the preservation of as much as possible of the flat plane of the piece was desirable. A coin, therefore, with the lines of the design, figures, and letters depressed or incused, instead of being raised or in relief, would meet the wishes of the bankers and business men, and at the same time introduce a novelty in coinage that was artistic as well as adaptable to the needs of business.
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> The President adhered to the idea that the high relief afforded greater possibilities of artistic results, and referred to the beauties of the ancient gold coins. Unquestionably he was correct in this opinion, but I called his attention to the fact that he and the other promoters of the new coinage were trying to do more than the ancient Greek artists and coiners had found possible, and that the Greeks had only been able to produce a high relief on one side of their coins, while we were endeavoring to give a high relief on both sides. We had in a way succeeded, for by use of a medal press we had outdone the Greeks. But the uncompromising demands of trade would not tolerate even the one-sided coins of ancient Greece. The President expressed surprise at my statement, and at once sent a messenger to his room for a beautiful example of Grecian work in the shape of a gold coin of the days of Alexander the Great. Of course, he found one side quite flat, while the other side was in high relief.
>
> I enjoyed the luncheon. It was as simple and devoid of ceremony as a lunch would be in the home of any well-to-do family. Mrs. Roosevelt, a lady friend, and a federal judge, an old-time friend of the President were also at the table. It so happened that it was the anniversary day of April 1865, of the surrender of the judge as a Confederate army officer in the closing days of the Civil War. As might be imagined, it put the judge in a reminiscent mood. He was an excellent talker and interested us all. One of his remarks was that no one could tell what would happen in life. "The day I surrendered as a Confederate soldier I little expected to stretch my legs under a dining table in the White House, as guest of the President. Why, I remember I was so dejected on that occasion that an aged friend of mine said to me, 'You think you and this country are going to hell on a toboggan, but that is all wrong.' So I found out."
>
> It was after the lunch and we had excused ourselves from the others that the question as to the new design for the half and quarter eagles took place. The discussion ended by the President authorizing Dr. Bigelow and me to go ahead and produce some trial pieces

after the suggestions of the doctor. Bela L. Pratt, an artist of high repute in Boston, was selected to make the models for the designs, which were to be a faithful copy of an Indian head and the eagle with shortened legs. The models and dies were not finished until sometime in September. When the trial pieces were produced I was pleased with their appearance, for the nationality was so plainly stamped on the coin that it needed no lettering to tell anybody in any part of the world that it had been issued by the United States of America. It pleased the President, and he at once gave the official approval necessary for the adoption of the design. Soon after, the new coins were minted and placed within the reach of the public.

Considerable criticism followed the appearance of the new design. The depressed or incused idea of portraying the figures, device, etc. was unfavorably received, while the faithfulness of the designs to the objects represented, as artistic work, was very generally commended. Confirming the truth of the old saying, "there is nothing new in the world," we found, in looking over some authorities on ancient coinage, that almost the very first attempt at making coins was by depressing or incusing the designs. This issue finished the work of changing the designs of the gold coins.

Born in Boston in 1850, William Sturgis Bigelow was the son and grandson of two of that city's most prominent physicians. Following family tradition he studied medicine, graduating from the Harvard Medical School in 1874, after which time he went to Europe for five years and studied under prominent professors and doctors in Germany and Austria.

After his return he established a private laboratory for bacteriology in Boston. This proved to be unstimulating to Bigelow's active mind, so he joined the Massachusetts General Hospital as a surgeon. By 1882 he realized that his life interest lay in another direction, so he journeyed to Japan and spent seven years there studying philosophy, religion, and language, and amassing a glorious collection of art which later became the property of the Boston Art Museum, thus giving the institution the world's most prominent holdings in that area.

Bigelow formed a friendship with Theodore Roosevelt and corresponded and visited on many occasions. The President often sought his advice on political and artistic matters. Bigelow's thoughts concerning the Russo-Japanese War were taken into consideration, and, for example, when Charles L. Freer in 1905 offered to give his sizable art collection to the United States government, plus $500,000 to construct a suitable building, Roosevelt suggested that Dr. Bigelow be sent to examine the art. So, it was perhaps natural that Bigelow's thoughts concerning coinage received Roosevelt's immediate and close attention and consideration.

It was reasonable that Bigelow would commission his friend and fellow Bostonian Bela Lyon Pratt to execute his novel coinage ideas. Pratt, born in 1867, studied at the Yale School of Fine Arts. In 1887 he went to New York where he studied under Augustus Saint-Gaudens at the Art Students' League. The latter was so impressed with Pratt that he signed him as an assistant in his private studio. Following the suggestion of his mentor, Pratt went to Paris in 1890 to study under Falguiere and Chapu. In the Ecole des Beaux Arts he was foremost in his class, obtaining numerous awards. Returning to America in 1893, he sculpted two gigantic groupings for the World's Columbian Exposition. In the same year he became an instructor at the Boston Museum School of Fine Arts, in which capacity he remained until his death in 1917.

Works by Pratt include a medal commissioned by Harvard University alumni for President Eliot, the Yale bicentennial medal, a figure for the Sears Monument (Cambridge, Massachusetts), numerous large sculptures for the Library of Congress, and many other busts, sculptures, and medallions. Statues of nude young women were a particular interest, with one winning a silver medal at the Pan-American Exposition in Buffalo, 1901. At the Panama-Pacific International Exposition, San Francisco 1915, his exhibit of 17 pieces of sculpture earned a gold medal. Work was accomplished at his Boston studio, with summers spent at his home in North Haven, Maine.

Pratt's quarter eagles and half eagles received little national attention at the time, apart from momentary criticism in the press at the time of their release. Augustus Saint-Gaudens' powerful $10 and $20 designs eclipsed those of Pratt, and today the efforts of the former are by far the better remembered. (Note: For additional information concerning the Bigelow-Pratt coinage refer to the chapter on half eagles.)

Coins of the Pratt design, known as Indian quarter eagles by collectors today, were minted intermittently from 1908 through 1929. Issues with mintmarks have the identifying mint letter at the lower left reverse. The mint letter is in relief and is the highest point on the reverse of the

coin, a feature which caused the mintmark to wear immediately.

Production was accomplished at Philadelphia from 1908 through 1915 and 1925 through 1929. The only branch mint issues were those of Denver, minted in 1911, 1914, and 1925. The lowest mintage of the entire series is recorded by the 1911-D, of which 55,680 were struck, making it scarce today. Other mintages range from a low of 240,117 (1914) to the high point of 704,191 (1911). By the time the Indian quarter eagle made its appearance, coins of this denomination were rarely seen in everyday commerce. Circulation was mainly limited to large international transactions and to occasional disbursement by banks, particularly during the holiday season. The features of the design made it very susceptible to wear, probably the opposite situation from that intended by Bigelow, Pratt, and Roosevelt. Just the slightest amount of circulation resulted in the higher surfaces of the coin losing lustre.

By the end of 1929, the last year of the quarter eagle, some 15 different date and mintmark varieties had been made of the Indian style. Those coined during the last years of production were not released, for the most part, and were subsequently melted in the 1930s. Today the 15-coin Indian quarter eagle set is popular with collectors. There are no extreme rarities in the series, and the 1911-D, the most elusive, is plentiful enough that those seeking one have no trouble acquiring a specimen. However, Uncirculated pieces are rare.

Proofs in the quarter eagle series were produced intermittently from 1821 onward, with continuous emission for every year from 1854 through 1915. In the early years examples were made for presentation purposes, the earliest recorded of which is the 1821. In this year possibly a dozen or so were made (Breen traces six today), undoubtedly on the occasion of reintroducing the quarter eagle coinage after a lapse following 1808. Scattered Proofs are known for certain other years in the 1820s and 1830s, all of which are exceedingly rare today. The 1834 with-motto quarter eagle of the old style, one of the great rarities among earlier-dated pieces, is known to the extent of fewer than a half dozen Proofs. In the same year, following Kneass' redesigning of the portrait, it is believed that two dozen or so Proofs were made of the small portrait variety of the so-called Classic Head, without motto. Proofs are known of the 1835, 1836, and 1837 Classic Head issues, and all are extreme rarities. Proofs were likewise made of the Coronet style from 1840 through 1848 inclusive, and possibly also 1849 (although no specimens of the latter date can be traced today). Whether or not Proofs were struck of the famous 1848 CAL. issue is a matter of controversy, with some authorities calling mirrorlike pieces "prooflike Uncirculated" and others referring to them as "Proofs."

From 1854 through the end of the nineteenth century Proof coinage was continuous at the Philadelphia Mint. Early issues are great rarities, with only about a half dozen known of 1858, for example, the first year that Proofs were openly available to collectors from the Mint.

Although the Mint records show that 80 Proofs were made in 1859, 112 in 1860, 90 in 1861, 35 in 1862, and so on, these figures have little meaning relative to the number known today. Undoubtedly many were destroyed at the Mint. David Akers' comment concerning 1861 Proof quarter eagles is representative and significant:

> Although 90 Proofs were reportedly struck, undoubtedly the majority of them were melted, since the 1861 has appeared in auction less often in Proof than the 1862, 1863, or 1865, all of which have Proof mintages of only 35 pieces or less.

The desirability of Proof Philadelphia Mint issues of the 1860s and early 1870s stems not only from the low number of survivors but also from the rarity of each date in *any* condition. Business strike mintages were low, thus placing an additional demand on the few Proofs. In 1863 no business strike coins were made, and the total Philadelphia Mint production was limited to just 30 Proofs, of which no more than a dozen are believed to have survived.

The 1875 Philadelphia issue is runner-up for rarity honors. Just 20 Proofs were made, plus 400 business strikes. About a dozen Proofs are known today.

Proof mintages from 1872 through 1875 are low, with production of just 20 pieces recorded in each of the last two years. By this time the Mint was probably aware of the true demand for Proofs and realized the futility of striking extra specimens, just to melt them at year's end. As popular as they may be with collectors today, at the time Proofs were in very sluggish demand by numismatists. When the remarkable collection of

1857D. No record of public sale.
1857O. Very fine, Smith, 1906 ..... $ 4.00
1857S. Uncirculated, Appleton, 1907 ..... 36.00
1858. Very fine, Appleton, 1907 ..... 3.50
1858C. Very fine, Appleton, 1907 ..... 9.00
1858S. No record of public sale.
1859. Very fine, Appleton, 1907 ..... 4.00
1859D. No record of public sale.
1859S. No record of public sale.
1860. Brilliant proof, Smith, 1906 ..... 6.50
1860C. Very fine, Appleton, 1907 ..... 12.50
1860S. Fine, Appleton, 1907 ..... 7.00
1863. (Only thirty coined.) Brilliant proof, Maris, 1886 .... 5.40
1863. Mills, 1904 ..... 55.00
1865. (1,545 coined.) Dull proof, Mills, 1904 ..... 17.50
1867. (3,250 coined.) Very fine, Appleton, 1907 ..... 38.00
1875. (420 coined.) Brilliant proof, Appleton, 1907 ..... 45.00
1877. (1,652 coined.) Uncirculated, Appleton, 1907 ..... 10.00
1881. (680 coined.) Brilliant proof, Stickney, 1907 ..... 4.50
1885. (887 coined.) Brilliant proof, Stickney, 1907 ..... 5.25

Very few of the quarter eagles other than those here mentioned command a premium worth mentioning. Even the latest of the quarter eagles, dated 1908 and 1909, of the new design, known as the Bigelow-Pratt pieces, made at the suggestion of Dr. William S. Bigelow, after the design of Bela L. Pratt, the sculptor and medalist, both of Boston, are worth no more than face value.

$2.50. 1909. Pratt-Bigelow design. No premium.

While collecting quarter eagles of all dates is popular today (1982), in 1909 when Edgar H. Adams published his "Official Premium List" of gold coins he noted that very few quarter eagles after the mid-nineteenth century had interest or value to the collector. Issues in great demand today were ignored back then, with the result that many gold coins which might have been saved were lost or melted.

Col. Mendes I. Cohen, of Baltimore, Maryland, was sold at auction in 1875, Proof gold pieces in some instances brought less than their melt-down value! Such market performance contributed to the rarity of pieces in two ways. First, it reduced demand for new issues. Second, many numismatists who owned Proof gold coins, finding no attractive premiums for them, simply "spent" the pieces. Surprisingly, the same philosophy continued well into the twentieth century. As late as 1915-1920, Proof double eagles of certain dates retailed for as little as $20.50 to $22!

Despite this, Proof mintage trended upward during the 1880s and 1890s. This was due to a speculative interest which arose during the decade of the 1880s and to a general expansion of the coin collecting fraternity. Proof gold coins were sold individually at the Mint — it was not necessary to buy them in sets — so, in general, gold dollars and quarter eagles, representing the most inexpensive denominations, had higher mintages than the half eagle, eagle, and double eagle. As an example, in 1898, 165 Proof quarter eagles were struck, as compared to just 75 half eagles, 67 eagles, and 75 double eagles. From 1892 through 1907, Proof production each year exceeded 100 pieces, with the high mark being 1901 when 223 quarter eagles were made.

When the Indian quarter eagles were introduced in 1908, Matte Proofs were made. This technique, developed in France, consisted of striking a coin very carefully so as to maximize the design details, and then, after striking, subjecting it to one of several processes. Apparently when the method was adopted at the Philadelphia Mint many variations were tried, thus accounting for differences in finish for different years. Some pieces were pickled in acid, whereas others were subjected to sandblasting with fine-grain particles. Still others, notably the so-called "satin finish" coins of 1909 and 1910, appear to have been made by still a different process. Exact production details are not known to numismatists today. From time to time attempts have been made to simulate the Matte Proof finish (and its related descriptive finishes, Sandblast Proof, Satin Proof, and Roman Finish Proof) by pickling or treating Uncirculated pieces, but these efforts have not been successful, and experienced numismatists can tell the difference.

In 1908, the first year of the innovative Pratt Indian design, 236 Matte Proofs were reported coined. In this instance, the first year of issue, it is quite likely that many were dispersed as the incuse design attracted wide curiosity. Whether or not all 236 found new owners is not known. In any event, after the initial distribution many coins were "spent" as collectors vociferously objected to the Matte Proof finish, feeling that a Proof should be "brilliant" and "mirrorlike" rather than dull. Despite collector complaints, mintages were fairly high: 1909 (139 Proofs), 1910 (an astounding 682 Proofs), 1911 (191), 1912 (197), 1913 (165), 1914 (117), and 1915 (100). It is believed that most of these went to the melting pot; however, some were sold in bulk to dealers. Concerning the anomalous Proof mintage for 1910, David Akers notes:

> The reported mintage of 682 Proofs is significantly higher than for any other Proof quarter eagle. However, Proofs of this date are much more rare than those of 1908, 1911, 1912, or 1913, and therefore one can reasonably conclude that this mintage figure is in error, or that most of the mintage was melted.

David Akers was able to locate sale records for just 21 coins sold at auction, including duplicates. It is doubtful if more than two or three dozen are known today.

In the present market, Matte Proof gold coins of all denominations, quarter eagle through double eagle, are considered to be the "rarest of the rare." Their initial unpopularity with collectors, plus the spending of many pieces, particularly during the 1915-1925 years, has reduced the number of known issues to just two or three dozen in most instances, with the higher denominations being even rarer.

The quarter eagle denomination has always been popular with collectors. Although there are numerous rarities in the series (the famous 1841 and 1863 being among them), there are no dates or mintmarks which are "impossible." All issues from 1796 through the 1834 with-motto variety are exceedingly elusive and are seldom encountered. The relatively small diameter of the quarter eagle makes it an ideal gold coinage medium, with the result that the portrait of Liberty in the Coronet series (1840-1907) has almost a cameo appearance. There is a certain aesthetic characteristic to the series which has made it popular with collectors over the years. The Indian quarter eagles (1908-1929) have long attracted a separate following, with many people successfully completing a collection of this unique incuse

ormat.

Last minted in 1929 and discontinued officially y legislation in 1930, quarter eagles were no onger being made when the curtain came down n gold coinage in 1933. By that time the smallest circulating gold coin (the gold dollar having been discontinued in 1889) found its primary use in gift-giving, for inclusion in children's Christmas stockings, and the like. Of course, collectors avidly prized them then as they do now.

$3 Gold Pieces

7

The $3 gold piece is one of the more interesting stories in American coinage history. Authorized in 1853 and first minted in 1854, the coin was thrust upon the American public, who had neither demanded it nor wanted it. After an initially generous coinage there were enough $3 gold pieces to satisfy the needs of the few who wanted them, so production sharply declined. The piece remained part of the coinage spectrum until 1889, but with the exception of just a few years the quantities minted were exceedingly low. As is so often the case in numismatics, coins that were not especially desired by the public became rare as a result, with the consequence that today they are highly prized by numismatists.

As incongruous as the $3 denomination may be to the public today (the expression "queer as a $3 bill" is still occasionally heard, for example), at one time $3 notes were a basic part of the monetary system. The initial currency emissions authorized by the Continental Congress in Philadelphia, June and July 1775, included the $3 value (as well as all other dollar denominations from $1 through $8). The denomination was also found among certain issues of the states, the $3 New Hampshire note of 1776 and a Massachusetts note of 1780 being two examples.

From the turn of the nineteenth century through the early 1860s, when federal "greenbacks" replaced them, thousands of varieties of banknotes were issued by banking institutions, factories and merchants, states, counties, municipalities, railroads, and other entities. The most commonly circulated dollar denominations were $1, $2, $3, $5, and $10. Virtually every bank which issued notes included one or more variations of the $3 value. Produced by private banknote companies, these bills were issued in huge quantities by banks and others, often without substantial assets to back them. The financial panic of 1837 caused many issuers to become insolvent, giving rise to the term "wildcat bank" to many of the institutions and the name "broken bank notes" to the currency they issued. Despite the worthlessness of unbacked $3 and other notes to the public at one time, today these and other denominations of the era are highly desired by numismatists.

When the federal government issued the Legal Tender series of greenback notes in the 1860s it was proposed that the $3 denomination be included, but when notes were actually produced this value was dropped, and the resulting series consisted of only the $1, $2, and $5 among the lower denominations.

During the 1832-1834 years there was considerable debate in Congress concerning silver and gold coins. At the time a $3 gold piece was proposed, but no coinage resulted from the idea.

The birth of the $3 coin had its inception with the bill passed on February 21, 1853, the main purpose of which was to reduce the authorized weight of all silver pieces except the dollar. The necessity of such action was caused by the increased value of silver in relation to gold, as supplies of the precious yellow metal became more plentiful due to California output and other considerations. At one time during the period the melting of two silver half dollars would yield metal of which the equivalent in gold was worth $1.03½. Once the new standard was in effect, silver coins, which had been intensively hoarded circulated freely once again.

The reason for including a $3 piece as part of the legislation has never been satisfactorily explained. Numismatists have theorized that it may have been done as a convenience to buy 3-cent postage stamps in sheets of 100, or to purchase silver three-cent pieces (first issued in 1851) in the same quantity. Considering the closeness in value to the popular $2.50 denomination, the $3 piece seems illogical.

The challenge fell to James B. Longacre, Mint engraver, to design a motif for the $3 piece which would be distinctive and which could not be easily confused with the portrait of Liberty wearing a coronet which was in use on the contemporary $2.50 and $5 denominations. In *The United States Mint and Coinage* Don Taxay quotes a draft in Longacre's hand which states his view of the situation:

> I have rarely if ever felt more perplexity in determining on the nature of a device appropriate to the issue, than in respect to the intended coin of the value three dollars. Its approximation in size and weight of necessity, to the coin already in use, and extensively so — of the value of two and one half dollars, known as the "quarter eagle," makes it important that it should bear a distinctive character, in the device and inscription, which should be peculiarly striking, and obvious in order to prevent, or guard against the danger in circulation of passing or receiving one piece for the other.
>
> It does not fall into the regular series or multiples of the other denominations which constitute the national currency; and it is therefore anomalous, excepting only the three cent coin.

The challenge was especially important for Longacre, for he still had memories of the intense controversy surrounding his earlier production of the 1849 gold dollar and double eagle and sought to vindicate his ability by demonstrating success. Following his own ideas Longacre selected as an obverse motif an Indian princess with a feathered headdress. For the reverse he designed a wreath consisting of corn, cotton, wheat, and tobacco. A few years after the $3 design was a reality Longacre wrote a memorandum to James Ross Snowden, director of the Mint, giving his views concerning coinage designs, including the one he prepared for the $3 issues:

> I have not been accustomed to consider myself responsible for the designs and devices of the coinage, unless those designs have originated with myself. This has not been from any desire to avoid responsibility where it justly belonged, but from the obvious propriety of the case. The execution of die etc. belongs to the engraver in every case; but the design does not, unless made by, or originating with him. An engraver, strictly speaking, is very frequently placed in a position where he cannot exercise a discretionary power in respect to the design from which he is required to work, without appearing to conflict with the very authority under which he is employed. This fact induces a habit of acquiescence; which unfortunately for him is sometimes construed to his disadvantage. As for instance, when a design from another hand is placed before him, the defects of which may be apparent to his own judgment, yet he perceives no alternative (without a collision of opinion which it is not his interest or desire to provoke) but to use skill in making the best of it, because nothing short of a radical change of the whole affair would suffice to remove the defects he perceives to be inherent . . .
>
> While thus stating the limitation to which the proper duty and consequent responsibility of the engraver is restricted, I would not have it inferred in my own case that I should decline the responsibility of design, if it were timely and authoritatively presented for my acceptance; it would rather enhance the value and interest of my place in the public service . . . My thoughts were early turned to the subject of appropriate design in our coinage, but I found it surrounded with greater difficulties than I had apprehended, from the conflicting views of those who claimed to be heard if not to dictate. The extent and variety of their views discourage me from pursuing the course I should in all probability otherwise have taken.
>
> The first opportunity I had of giving any practical expression of my own on the subject [this indicates that Longacre's design for the 1849 $1 and $20 was dictated by others] occurred under your favor in respect to the three dollar coin. The more consideration I have given to this expression, I am but the better satisfied of its ultimate adaptation. I allude more especially to the design on the obverse.

Longacre went on to say that those who usually dictated coinage designs preferred Greek and Roman precedents, but he felt that it was more appropriate to create a uniquely American symbol rather than to adopt something from the classics:

> Why should we in seeking a type for the illustration or symbol of a nation that need not hold itself lower than the Roman virtue or the science of Greece, prefer the barbaric period of a remote and distant people from which to draw an emblem of nationality; to the aboriginal period of our own land; especially when the latter presents us with a characteristic distinction not less interesting, and more peculiar than that which still casts its chain over the civilized portion of the older continent? Why not be American from the spring-head within our own domain? . . .
>
> From the copper shores of Lake Superior to the silver mountains of Potosi, from the Ojibwa to the Arauca-

nian, the feathered tiara is a characteristic of the primitiveness of our hemisphere, as the turban is of the Asiatic.

Nor is there anything in its decorative character repulsive to the association of Liberty with the intelligent American; to us it is more appropriate than the Phrygian cap, the emblem rather of the emancipated slave, than of the independent freeman, of those who are able to say "we are never in bondage to any man." I regard then this emblem of America as a proper and well defined portion of our national inheritance, and having now the opportunity of consecrating it as a memorial of liberty, our liberty, American liberty, why not use it? One more graceful can scarcely be devised; we have only to determine that it shall be appropriate and all the world outside of us cannot wrest it from us.

The objection made to this emblem on account of its correspondence with, or supposed deviation from European armorial bearings is not sufficiently intelligent to deserve much consideration. The objectors have probably seen the crests of the Princes of Wales consisting of three ostrich feathers . . . the probability is that the natives of this continent [North America] had worn their own feather head attire for ages before, with the right at least equal to that of any of the feudal potentates of the dark ages of Europe . . .

Apparently Longacre produced no preliminary pattern designs apart from sketches, for no variant pattern coins are known today nor are any recorded in the literature. The actual production coinage, commenced in 1854, seems to have sprung full-blown from his original ideas, without change or modification.

With a diameter of 20.5 millimeters (enlarged slightly in 1874) and a weight of 77.4 grains, the $3 made its appearance in circulation in 1854. At the Philadelphia Mint 138,618 pieces were coined. Two other mints turned out $3 pieces as well, Dahlonega to the extent of 1,120 pieces and New Orleans 24,000 pieces. The 1854 issues of all mints have the word DOLLARS on the reverse in letters considerably smaller than those used from 1855-1889. This difference represents the only significant change in the design of this denomination from its inception to its discontinuation.

Longacre's work was pronounced a success, and it was soon recommended that the gold dollar design, which caused difficulties in striking up properly (particularly at the center of the reverse), be changed to a miniature version of that on the $3 piece. The obverse and reverse were thus modified. Longacre apparently was especially pleased with his wreath design for when he was called upon to create a pattern for a small diameter cent in 1856 he adopted the $3 wreath for the reverse.

The 20.5 millimeter diameter placed it about midway between the 18 millimeter diameter of the quarter eagle and the 21.6 millimeter diameter of the half eagle. This plus the distinctive appearance of the obverse and new reverse design, both quite different from that used on other gold denominations, laid to rest any fears concerning confusion between the $2.50 and $3 denominations. In short, all was well with the $3 gold piece except for one thing: the coin was not needed or wanted by the public.

The issues of 1854 have several distinctive features. The Philadelphia mintage of that year is the highest recorded for the entire series 1854-1889. Instead of being a response to a specific demand, the 138,618 pieces made were done to "get the denomination started" and to familiarize bankers and the public with it. The Dahlonega and New Orleans issues, it turned out, were the only pieces of those branch mints to be coined as part of the $3 series.

The 1854-D $3 piece stands today as one of the prime rarities of the denomination. Only a few dozen are known, nearly all of which show extensive evidence of circulation. In his study of the series David Akers furnishes the following observation:

Specimens of this date [referring only to the Dahlonega issue of 1854] are usually grossly overgraded, partly because the date is a very rare one, but also because they are just hard to grade and the tendency with most auctioneers is to be optimistic when there is a doubt. I have seen several AU pieces but never an unequivocally Mint State one. Even strictly graded Extremely Fine specimens are very rare.

In keeping with the appearance of other Dahlonega issues of the period, all known specimens show evidence of sloppy craftsmanship. As Akers notes, "All specimens that I have seen are very poorly struck with very little hair or headdress detail and weak or missing denticles. The milling is also characteristically weak in places . . ." No Charlotte Mint $3 pieces were produced.

During the following year, 1855, coinage was effected at the Philadelphia Mint (50,555 pieces) and, for the first time in the series, at the San Francisco Mint (6,600 coins). The year after that,

1856, saw a more balanced production at the same two mints: 26,010 Philadelphia strikings and 34,500 San Francisco pieces. The San Francisco issues were produced with three different sizes of mintmarks. Most examples seen today are of the so-called Medium S variety.

1857 witnessed coinage at the same two mints, with 20,891 produced at Philadelphia and 14,000 at San Francisco. After that point San Francisco coinage was suspended until 1860.

In 1858 only 2,133 coins were made, all at Philadelphia. The mintage figure alone indicates that this is a rare date, as it indeed is, but in terms of the number of pieces known today, certain other issues with higher mintages are more elusive, 1855-S being an example.

1858 seems to have marked the end of the production that was extensively circulated. Most of the $3 pieces from 1854 through that year were distributed through banks and elsewhere, with the result that today nearly all specimens surviving show signs of wear. Hoarding seems to have been kept to a minimum. A nominal exception is the 1854 Philadelphia issue, of which numerous Uncirculated pieces are known, probably saved due to the novelty of being the first year of issue. (The first year of issue of a design has traditionally resulted in an inordinate number of pieces being saved; there are, however, numerous exceptions.) After 1858, Uncirculated specimens become much more numerous in relation to the total mintage, with a few scattered exceptions.

The 15,638 examples minted in 1859, all at the Philadelphia Mint, mainly went into circulation, but probably a fair number were hoarded as well. During the late 1850s preparations were made for coinage at branch mints on several occasions, but usually no coinage materialized. For example, in 1859 two reverse dies were sent to New Orleans and four were shipped to San Francisco, but no 1859-O or 1859-S coins were struck. In the same vein, dies were sent to New Orleans in 1855 and 1856 but no coins resulted.

In 1860 $3 pieces were struck in two locations, 7,155 at Philadelphia and approximately the same number, 7,000, at San Francisco. There was a problem with part of the San Francisco coinage, and 2,592 were withheld from circulation as being lightweight. These were subsequently melted in 1869, and the resultant bullion was used to mint other gold denominations. Thus, the net mintage for circulation of 1860-S was 4,408. These latter 1860-S $3 pieces were apparently all released into circulation where they found ready use in commerce. Few if any were deliberately saved, with the result that Uncirculated specimens are exceedingly rare today. David Akers in his study of auction records for the denomination stated that he was "unaware of the existence of a full Mint State specimen, although I have seen one Choice AU-55 piece and at least two others that graded AU-50." However, Dr. Richard A. Bagg has reported seeing a Choice Uncirculated coin. On the other hand, Uncirculated examples of the 1860 Philadelphia coinage, while not common, appear on the market with some frequency.

The following year, 1861, began the period of exclusive Philadelphia Mint coinage, a span which extended until the discontinuation of the series in 1889. There was one exception, the 1870-S issue of which just one coin was struck. From 1861 onward mintages trend downward, although exceptions occurred in 1874 and 1878. Uncirculated specimens of these two years, particularly 1878, are frequently encountered today. The mintage figures of the period were low: 1861 (6,072 struck), 1862 (5,785), 1863 (5,039), 1864 (2,680), 1865 (1,165), 1866 (4,030), 1867 (2,650), and so on. Early in 1862 the government, immersed in the Civil War and faced with widespread public hoarding of coinage, suspended specie payments. $3 pieces produced after that date were for the most part retained by the Treasury Department. In the early 1870s specie payments were resumed, and numerous earlier coins were released into circulation.

Of all American gold coins probably none is more famous than the 1870-S $3 issue. A capsule history of the piece was provided by Walter Breen in an article in the December 1963 issue of the *Numismatic Scrapbook Magazine*, an excerpt of which follows:

> The story of [the 1870-S] is interesting. Telegram of May 14, 1870 received at the Philadelphia Mint from the San Francisco branch: LETTER S OMITTED ON ONE AND THREE DOLLAR DIES SENT TO THIS BRANCH FOR THIS YEAR. 2000 PIECES COINED. CAN THEY BE ISSUED. O.H. LAGRANGE SUPT. [The 2,000 pieces were gold dollars.]
>
> Following this is a letter dated May 27, 1870 from San Francisco superintendent LaGrange to Director Pollock: "I enclose herewith the receipt of Wells, Fargo & Co. for one dollar and three dollar dies which

To Gold Collectors

HERE IS A COIN ALL ALONE BY ITSELF

$3 Gold S. Mint 1870

Never in circulation—Never before in the Market. With the Coin is an interesting little history by the Coiner who made it. If interested address,

H. T. VanCamp,

1 Union Square. New York.

Little is known of H.T. VanCamp, who in 1907 placed an advertisement in "The Numismatist" offering for sale the unique 1870-S $3 issue. The coin was subsequently acquired by William H. Woodin. In 1911 it was sold at auction when certain of the Woodin holdings were distributed.

were yesterday forwarded to you at Philadelphia. It is proper to state that our Coiner [J. B. Harmstead] cut the letter S on the three dollar die after it was received here for the purpose of stamping a single piece to be put into the casket of the cornerstone of our new mint building. Only one piece was struck under my direction for the purpose above stated."

In the early years the San Francisco Mint conducted business in a building measuring about 60 feet square located on Commercial Street, using equipment and facilities acquired from Curtis, Perry & Ward, who earlier struck private gold coins. The cramped facilities were described in a report by the director of that institution:

> It is almost impossible to conceive how so much work can be well done, and so much business transacted safely, in so small a space. The entrance to the business office is up a steep pair of stairs and through a dark hall rendered unwholesome by the fumes of acids and uncomfortable by the noise of machinery and the heat of the engine. The apartments of the different officers and the desks of the clerks are cramped and inconvenient, and the vaults depend for their safety chiefly upon the presence of well-tried watchmen.

To remedy the confined situation, a new mint structure was planned, the cornerstone of which was laid in 1870. Work was completed several years later, and in the summer of 1874 the new edifice, located at 5th and Mission streets, was ready for coinage. This structure was occupied until 1937, when the operations were transferred to a three-story marble building now known as the San Francisco Assay Office (but which today functions as a mint; limited coinage for circulation plus Proof coinage is accomplished there). Perhaps the finest hour of the old Mint building occurred during the San Francisco earthquake and fire of April 18, 1906. Although the city for blocks around was burned to the ground, the Mint edifice was saved through heroic efforts of the administration and employees. Today the structure is used as a museum.

Although the purpose for making the 1870-S was to place it in the cornerstone for the new Mint Building, apparently this was not done, or else two were struck. It seems likely that the only coin known today, which can be described as Extremely Fine, lightly polished, and with some scratches saw use as a pocket piece, possibly by Coiner Harmstead, who was responsible for striking it. David Akers describes the coin as having a pebbled appearance similar to a coin which has been used as jewelry:

> There is also minor damage at the obverse rim below the bust, indicating that the coin probably was worn on a key chain or watch fob. The numerals '893' have also been scratched upside down into the reverse field above the wreath. The S mintmark is totally unlike the mintmark on any United States coin, in particular the S Mint coins of 1870, lending credence to the story that the mintmark was cut into the die by hand after the die reached San Francisco.

The peregrinations of the unique 1870-S from the time of striking, 1870, until it reached the hands of William H. Woodin are not known today. Woodin, a Berwick, Pennsylvania industrialist, had close ties to the Treasury Department (later, in 1933, Franklin D. Roosevelt named him to the post of secretary of the Treasury). With well-placed connections he was able to acquire many rare United States pattern issues which had been saved by the Mint, including quantities of some. It is possible that this influence led to the acquisition of the 1870-S or, more probably, he came into personal contact with someone who owned it. In 1911 the coin appeared in the auction of the Woodin Collection, where it was stated that it was a duplicate of the coin in the cornerstone, possibly to avoid a controversy. A couple of years earlier, in 1909, a furor was created when it was announced that William Woodin paid $10,000 each for two unique 1877 $50 patterns, each of a different design, struck in gold and apparently retained at the Philadelphia Mint until John W. Haseltine and Stephen K. Nagy, both of whom were well-placed with mint officials, acquired them. To quiet down the commotion, a private settlement was made between the sellers and Woodin, and nothing further was stated except that Woodin noted that he was "most satisfied." It was later rumored that Woodin had received all of the Mint's duplicate patterns of former years, a group of coins encased in several large crates weighing hundreds of pounds from Haseltine and Nagy. Included were quantities of 1896-dated pieces, formerly believed rare, which in the 1950s were finally dispersed by a Berwick numismatist who obtained them from Woodin's family.

During the 1920s the unique 1870-S was part of the collection of Waldo C. Newcomer, of Baltimore, Maryland. In the 1930s the Newcomer coins were sold on a consignment basis by B. Max Mehl, and the 1870-S found a new home.

Sometime around 1945 the unique 1870-S $3 piece was acquired by Ted and Carl Brandts. The

Brandts brothers operated the Celina Coin Company in Celina, Ohio and made quite a splash in the 1940s, primarily by running high-level advertisements emphasizing rarities. In December 1945 the piece was advertised in *The Numismatist* and was described as follows:

> The Rarest United States Coin. THREE DOLLAR GOLD PIECE 1870 SAN FRANCISCO MINT. The only coin listed as UNIQUE in the "Standard Catalogue of United States Coins." As far as we know, there was only one piece struck. Some claim two specimens were struck, one being in the cornerstone of the San Francisco Mint. Price on application.

Through Stack's of New York City, the piece was acquired by Louis Eliasberg, who reportedly paid $11,550 for it in January 1946.

Today the 1870-S is recognized as *the* prime rarity among United States gold coins.

The 1870s and 1880s saw a continuous mintage of $3 pieces, with figures being low except for 1874 and 1878. Only Proofs were minted in 1873, 1875, and 1876. Mintages of circulation strikes were just 500 for 1881, 900 for 1883, and 801 for 1885, among the lowest figures in any American gold series.

As was the case with gold dollars of the 1870s and 1880s, many of the $3 pieces were saved by hoarders and speculators. Thus, although mintages were exceedingly low, many more survived proportionally than did for issues of earlier years. Although just 500 business strike 1881 $3 pieces were made, David Akers in his study of auction appearances was able to trace 85 records. If one makes a liberal deduction for duplicate appearances of the same coin, it is still probable that 30 or 40 different pieces have appeared in sales over the years, or nearly 10% of the original mintage. Still, the intriguing low mintages of the period have made these pieces favorites with collectors, and when offered, the coins elicit strong bidding competition.

A close parallel can be drawn between the gold dollar and $3 series. Most earlier issues were widely circulated, with the result that Mint State specimens are elusive today, with just a few exceptions. Later issues were saved in greater proportions, with the result that numerous Uncirculated pieces exist, and worn pieces are decidedly scarce. For example, for the 1888 $3 piece David Akers traced 69 auction appearances of Uncirculated examples but only 39 worn ones. On the other hand, of the 1857 $3 he found just 8 Uncirculated pieces but 118 appearances of worn specimens.

Proofs were struck of all Philadelphia Mint issues, commencing with 15 examples forwarded by Director James Ross Snowden to the Secretary of the Treasury on April 28, 1854. Coinage of business strikes commenced on May 1, 1854, and it is believed by some that additional specimens may have been struck on or about that time for presentation to interested government officials and distribution to collectors (who could obtain such pieces at the time by exchanging with or purchasing from Mint employees). Proofs of 1855 are exceedingly rare, with only two specimens traced by Walter Breen and recorded in his *Encyclopedia of United States and Colonial Proof Coins:* the Eliasberg Collection coin, believed to have earlier been in the John H. Clapp Collection and the William H. Woodin Collection, and the Garrett Collection example. This marks the most elusive single Proof issue of the denomination.

1856 Proof $3 pieces are elusive, with fewer than a half dozen traced. Fewer than a half dozen 1857 Proofs have been traced as well. In 1858 Proof coins were first sold to the public, and in that year probably 20 to 30 were made. About a dozen can be identified, some of which are considerably impaired. Of the 80 Proofs struck at the Mint in 1859 it is believed that just 35 were sold. Fewer than a dozen can be identified today. One-hundred nineteen Proofs were struck in 1860, 113 in 1861, 35 in 1862, and 39 in 1863, according to Mint figures. However, these figures are extremely misleading, as are other Proof gold coin production statements of the era. David Akers' figures are meaningful; he traces just nine auction appearances of Proof 1860 issues, five Proof 1861 pieces, but 16 Proof 1862 pieces and 10 Proof 1863 pieces, figures which are counter to the Mint figures! It is probable that most of the 1860 and 1861 Proofs went to the melting pot.

By 1865 the mintage figure for Proofs dropped to 25, perhaps more accurately reflecting the true demand for them. It seems probable that perhaps 15 to 25 examples were distributed that year. During the mid and later years of the Civil War one had to pay a sharp premium in terms of paper money, over twice face value at one point, in order to buy gold coins. The usual way to acquire Proof gold coins from the Mint was to pay with other gold coins at the face value, plus an extra

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In 1911 Thomas L. Elder sold at auction certain coins from the collection of William H. Woodin. Particularly important was the first offering at public auction of the only known specimen of the 1870-S $3 piece.

The Rarest United States Coin

THREE DOLLAR GOLD PIECE

1870

SAN FRANCISCO MINT

The only coin listed as UNIQUE in the "Standard Catalogue of United States Coins"

As far as we know, there was only one piece struck. Some claim two specimens were struck, one being in the cornerstone of the San Francisco Mint.

PRICE ON APPLICATION

CELINA COIN COMPANY

Ted Brandts CELINA, OHIO Carl Brandts

December 1945 advertisement of the Celina Coin Company featuring the 1870-S $3 gold piece.

Proofing charge.

The Proof mintage figures of the following several years probably also reflected demand: 1866 (30), 1867 (50), 1868 (25), 1869 (25), 1870 (35), 1871 (30), 1872 (30), and 1873 (25).

The 1873 figure of 25 pieces is on the low side for restrikes were made. Shortly after the time of mintage it was realized that 1873 was elusive in all grades. Apparently some had been made for circulation, but these were omitted from the director's report (the existence of business strikes is theorized today as worn examples exist and appear on the market from time to time). Collectors of the time assumed that 1873 was a "Proof only" issue, and a strong demand arose for it. Responding to the possibility of sales, the Mint produced additional pieces. Walter Breen believes that perhaps 14 to 15 original Proof 1873 $3 pieces (with open 3 in date and with flat fields), about seven restrikes with open 3 in date and with dished fields, and "at least 50" restrikes with closed 3 in date exist today. This total population of well over 70 pieces makes the official mintage figure of 25 Proofs meaningless.

In 1874 only 20 Proofs were made. Collectors paid little attention to this piece, for 41,800 business strikes were produced as well, making 1874 a common date. No restrikes were made, and of the 20 Proofs coined only about a dozen are known today.

1875 saw an official original production of 20 Proofs and no business strikes, thus isolating this year as the lowest total mintage of any Philadelphia $3 issue. The situation concerning the piece is summed up by Walter Breen in his *Encyclopedia of United States and Colonial Proof Coins:*

> One of the half dozen most famous rarities in American coinage. The 20 originals were delivered as of February 13, 1875; but Wayte Raymond and I were able between us one day in 1951 to tabulate well over that number, and he told me that he had been able to trace exactly 31 different examples. It is not presently possible to break this number down into originals and restrikes.

David Akers takes a slightly different view of the 1875, relating that in his opinion the "restrikes" are not restrikes at all, which may indeed be the case:

> Next to the legendary 1870-S, the 1875 is the most famous and highly desired $3 gold piece. It has auction records as high as $150,000, although, as the auction records conclusively show, it is not nearly as rare as the 1873 open 3 and is, in fact, one of the more common dates in Proof prior to the 1880s! Certainly it has been offered for sale many more times than the 1874 or 1878 which have identical reported [Proof] mintages of 20 pieces. This apparent discrepancy is answered by the fact that the claimed mintage of 20 for the 1875 is not really accurate since more than 20 pieces are known to exist. The term "restrike" has been used when discussing the 1875, but properly used, the term "restrike" denotes a coin that is struck in a year later than its date. Such has not been conclusively proven to be the case with the 1875 $3 gold piece, and although there are differences between known specimens, it is more likely that they were merely struck at different times during the same year rather than in different years.

The problem of overlapping appearances of the same coin makes it impossible to verify with certainty precisely how many 1875 Proofs exist, but perhaps 20 to 30 is a good estimate. David Akers enumerates 28 auction appearances, which includes duplicates, and Walter Breen, who noted that he and Wayte Raymond were able to trace 31 different examples, specifically identifies 11 coins which he has seen and mentions a few others which he knows of from auction catalogues. In any event, the appearance of an 1875 $3 at public auction has always been an occasion for excitement. Even if one were to be generous and say that as many as 30 pieces are known, which may not at all be the case, the coin is still sufficiently rare to be in the top echelon of legendary coins. After all, the 1804 silver dollar, which has often been called the "king of American coins," exists to the extent of 15 pieces.

As is the case with many legendary rarities, one buys a story as well as a coin when one acquires an 1875. This is part of the glamour, part of the appeal. Even though it can be conclusively demonstrated that Proof 1874 and 1878 $3 pieces are rarer, the 1875 will probably always sell for more.

The 1876 $3 piece, of which just 45 were coined, another "Proof only" date, is another of the landmarks in the series. Walter Breen notes that 20 examples were struck on February 19, 1876, and 25 more were made on June 13th. It is believed that about two dozen to three dozen exist today.

David Akers cites 28 auction records for the 1875 $3 pieces (out of a total of 20 coins officially reported struck). The figure of 28 includes some duplication and may net to just 15 or 20 different coins. For the 1876 (of which 45 Proofs were

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1946 announcement of the sale of what the catalogue cover proclaimed as the "world's greatest collection of U.S. gold coins," the property of F. C. C. Boyd (although the owner was not revealed at the time). Shown in the advertisement is a Proof 1875 $3, one of the highlights of the offering.

coined) Akers cites 49 auction records, which may represent 25 to 35. A comparison of these figures would indicate that if restrikes were indeed made of 1875 (which is not universally agreed upon, as David Akers notes), the number might have been nominal. It would seem that estimating a total mintage of no more than 30-35 pieces for the 1875 would be generous, based upon a comparison with 1876. Unlike the 1876, the 1875 has been subjected in print to the restrike-restrike-restrike type of writing and commentary, yet this does not seem to have adversely affected the price, for it remains the most sought after individual coin in the series (with the exception, of course, of the 1870-S). The shock value of the word "restrike" was lost to collectors long ago when it became evident that the United States Mint did indeed produce certain issues in limited quantities after the dates indicated. More important to collectors, it seems, is information concerning the number of specimens *actually existing* today. The fact that the 1804 silver dollar, of which no originals were ever made, holds the world's record auction price of $400,000 for a silver coin, is a statement in itself. It is not the writer's intent to comment one way or the other concerning the desirability or lack of it so far as restrikes are concerned but, rather, to be objective and to point out that the numismatic marketplace has made little distinction so far as prices are concerned, and that often it is unclear whether or not restrikes were made (referring here to the 1875 $3 again) and, if they were made, how important it is. Digressing for a moment we note that restrikes were made of certain Philadelphia Mint Lincoln cents during the coin shortage of the 1960s, and, more recently, 1976-dated bicentennial coins were struck before and after the date indicated, but few numismatists seem to care.

From 1878 through the end of the series in 1889, Proof mintages trend upward: 1878 (20 Proofs struck), 1879 (30), 1880 (36), 1881 (54), 1882 (76), 1883 (89), 1884 (106), 1885 (109), 1886 (142), 1887 (160), and 1888 (291) — so far a steadily mounting curve — then a reduction to just 129 in 1889. The higher mintages of certain years of the 1880s is explained by a popular speculation which took place in gold dollars during this time (refer to our chapter on the $1 denomination) and, to a lesser extent, to the $3 denomination by transfer. As is the case with gold dollars of the same era, many prooflike Uncirculated $3 pieces of the 1880s often are catalogued as "Proofs." The reader may refer to the Akers and Breen books on the subject (see bibliography) for a detailed discussion of die variety differences.

The Act of September 26, 1890, provided for the discontinuation of the $3 gold piece together with the related nickel three-cent piece. Both denominations ceased production the year earlier and by that time had become unpopular with the public and were infrequently seen in circulation. As they did not circulate actively, the Treasury Department melted the majority of $3 pieces during the next several decades, with the result that specimens were bringing a premium in the 1920s, when gold coins of other denominations from the same era — $2.50, $5, $10, and $20 — were available at face value through banks. Gold dollars, likewise discontinued in 1889, also brought a premium.

Today $3 pieces are in strong demand by collectors. Primary is the desire to include a representative example of the denomination in a gold type set. Over the years a number of ambitious numismatists have endeavored to form complete sets, but the unique 1870-S $3 has precluded everyone except William H. Woodin and Louis Eliasberg from completing the task. A few others have finished sets except for the 1870-S, and still others have formed collections lacking just two, three, or four pieces, the 1875 and 1876 usually among them.

No discussion of $3 pieces would be complete without mentioning the pattern design prepared by William Barber in 1872 as part of his revised motifs for all gold denominations. The obverse features the head of Miss Liberty with loose curls and a Phrygian cap (precisely the type of headpiece that Longacre deliberately avoided!). The reverse shows a perched eagle holding a shield and arrows. Although patterns were struck in gold, copper, and aluminum, apparently only a few were made, and the novel design was never seriously considered for circulation. This remains the only distinctive $3 pattern ever produced.

$4 Gold Stellas

8

The $4 gold coin, or *stella*, was conceived by Honorable John A. Kasson who at the time, 1879, was serving as the United States minister to Austria. Earlier he chaired the Committee of Coinage, Weights and Measures. Kasson believed it desirable to create a coin whose metallic content was stated in the metric system, the standard used in Europe, and whose value would approximate certain other gold coins popular overseas, including the Spanish 20 pesetas, the Dutch 8 florins, the Austrian 8 florins, the Italian 20 lire, and the French 20 francs.

The Committee of Coinage, Weights and Measures duly considered the proposal and forwarded the suggestion that the name "suitable for the four-dollar coin would be 'One Stella,' in analogy to one eagle, both the star and the eagle being national emblems on our coins." The fact that the $4 denomination was certainly redundant in a system employing at the time $2.50, $3, and $5 issues received little consideration.

The idea of an American coin that would circulate internationally was not a new one and had been suggested several times earlier. In 1867 representatives of 20 nations met in Paris and agreed that the French franc should serve as the standard for a coinage system which could be used interchangeably throughout the world. Subsequently legislation was introduced in Congress providing that the weight of the $5 gold piece be reduced from 129 grains to 124.9 grains to render it compatible with the French gold 25 franc piece. It was intended that other denominations compatible with the French franc system would be made as well, with each coin stating its value in American dollars and in francs. In 1868 Anthony C. Paquet designed a pattern piece showing on the obverse the head of Liberty, an innovative design unlike that used on regular coinage, and on the reverse the inscription 5 DOLLARS 25 FRANCS within a wreath. Pattern pieces were produced in copper and aluminum with plain and reeded edges. The Paris Mint produced companion pieces, designed by Barre, with different designs but with the denomination stated both in dollars and in francs. A related gold piece for use in Austria was struck at the Paris Mint and had the denomination expressed as 10 FLORINS 25 FRANCS. After considerable debate, the idea was dropped. No pieces were ever produced for circulation.

In 1874 additional patterns for an international coinage were produced. This time the ideas were suggested by Dana Bickford of New York City who during European travels was frustrated by the expense and difficulty of converting coins from one currency to another while crossing borders. Upon his return to America he presented several ideas to Dr. Henry R. Linderman, director of the Mint. In *United States Pattern, Experimental and Trial Pieces* Dr. J. Hewitt Judd notes that Linderman eagerly received the proposal, considering that it would be a great convenience to the public and a saving to the government. At the time the yearly expense for recoinage and waste on coins entering the United States from overseas points was close to a half million dollars.

Utilizing Bickford's suggestion, the Mint prepared a large-diameter pattern piece depicting on the obverse a new style of Liberty head and on the reverse the weight expressed in grams and the value expressed in different currencies: 10 dollars; 2 pounds, 1 shilling, 1 penny sterling; 41.99 marken; 37.31 kronen; 20.73 gulden; and 51.81

francs. Near the center as part of the inscription appeared the word UBIQUE, meaning "everywhere."

While such a coin was fine in theory, in practice there were many problems. First, the average American citizen had little knowledge of foreign exchange and would probably have been confused by the inscriptions. Second, and most important, in the nineteenth century, as today, foreign exchange rates were hardly stable. While the conversion values given may have been in effect in 1874, currencies fluctuated with regard to each other, and it would have only been a matter of time until the inscriptions would have been invalid. Congress did not approve of the proposed system, and Bickford's coin was produced only in pattern form.

Undeterred, Bickford zealously pursued his ideas, issuing over two decades later, in 1897, eight varieties of unofficial "dollars" made of aluminum with brass centers. One of the pieces, representative of the issues, depicts on the obverse Grant's Tomb, New York City, and on the reverse inscriptions noting that his "International Bi-Metal Dollar" would be a boon to mankind and would "be Good the World Over and Fulfill a Promise & Bring Prosperity." The reverse stated the value to be one United States dollar as well as equivalent values in France, Austria, Japan, Russia, Germany, and England. Like the 1874 Bickford $10 pattern, the unofficial 1897 dollars were convertible only by using foreign denominations and fractional parts, not evenly. For example, the French equivalent was 5 francs, 18 centimes, while the value in Germany was 4 marks, 20 pfennigs.

Santayana's admonition that "those who have not learned the lessons of history are condemned to repeat its mistakes" never has been a deterrent to Congress, which throughout the history of American coinage has repeatedly considered and debated the same impractical suggestions. So, in 1879 when Kasson's $4 international gold piece was proposed it was received with a degree of enthusiasm.

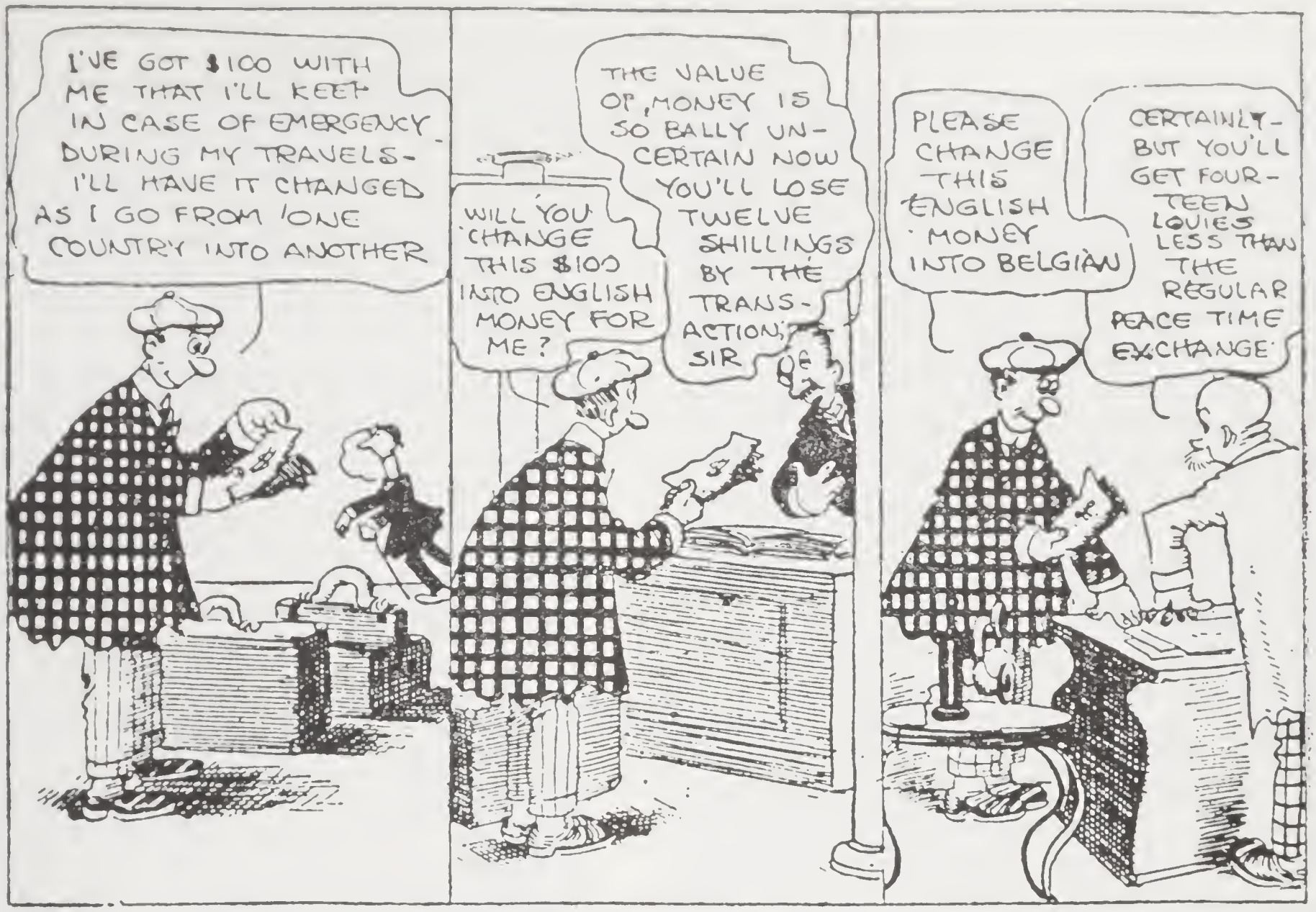
Charles E. Barber and George T. Morgan each prepared distinctive designs for the stella, Barber's being distinguished by Miss Liberty having flowing hair and Morgan's by coiled hair.

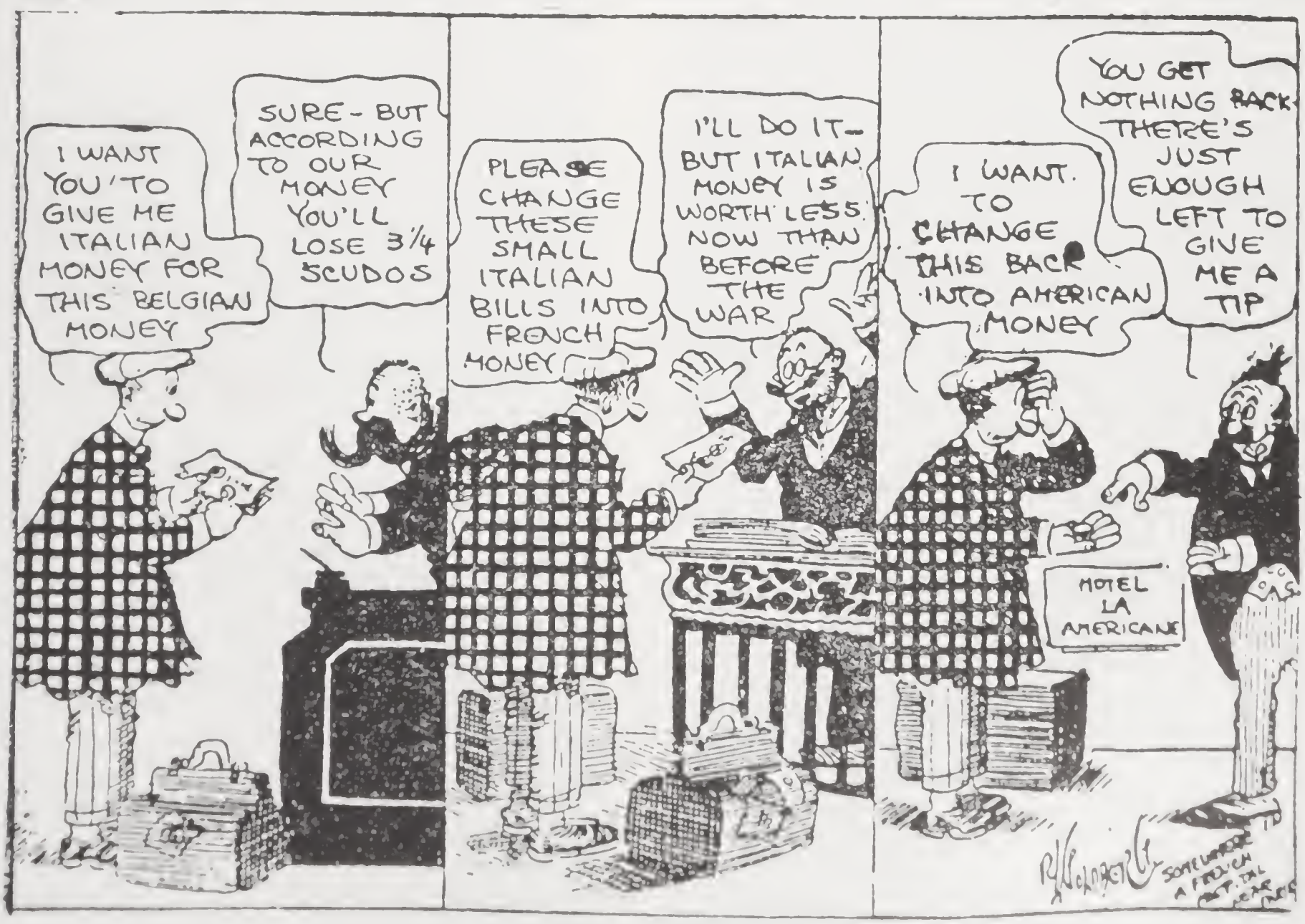
Charles E. Barber, born in London, England, November 16, 1840 came to America with his father William (who was appointed chief engraver of the United States Mint, following Longacre's death on January 1, 1869). Charles assisted his father and held an engravership at the Mint, succeeding his father as chief engraver in 1880, following the latter's death in 1879. By that time he had been employed at the Mint for over a decade and had assisted with many projects. Charles, who enjoyed reading, music, the study of nature, and walking, married Martha E. Jones and became the father of a daughter, Edith. In 1902, four years after the death of his first wife, he married Caroline Gaston. His tenure as chief engraver continued until his death on February 18, 1917.

Today Charles E. Barber is best remembered for the dime, quarter, and half dollar issues first minted in 1892 and continued through 1915 (in the case of the half dollar) and 1916 (the other denominations). The obverse of the first American commemorative issue, the 1892 half dollar produced for the World's Columbian Exposition, was also his work.

The obverse design of Charles Barber's 1879 flowing hair stella was hardly original and was a virtually exact copy of the motif used by his father for a pattern half eagle of the previous year.

Surrounding the portrait on Barber's 1879 stella appear the proportions of gold, silver, and copper and the weight in grams, with each numeral and letter separated by stars:
★6 ★G ★.3 ★S ★.7 ★C ★7 ★G ★R ★A ★M ★S ★.
The reverse design features a five-pointed star with the inscription ONE STELLA 400 CENTS at the center with other inscriptions surrounding, including DEO EST GLORIA ("God is glorious"). Of Barber's 1879 stella 15 pieces were struck in the year indicated. Specimens were made available to congressmen at $6.50 each, representing the Mint's production cost. The popularity of these was such that in 1880 400 additional examples were struck from the 1879-dated dies. It has been reported in numismatic literature that originals weigh 108 (as reported by David Akers) or 109 (as reported by Dr. J. Hewitt Judd), and that restrikes weigh from 103 grains to 109 grains. It has been further noted (by Dr. Judd) that "restrikes were made with a worn obverse." It is the present author's opinion that it is exceedingly difficult if not completely impossible to differen-





Foreign exchange problems for the American traveller as cartooned by Rube Goldberg in 1919. In response to such difficulties, numerous proposals for an international coinage were advanced during the late nineteenth and early twentieth centuries. The $4 Stella was one of these.

tiate originals from the so-called "restrikes" using weight as a basis and, further, the dies were not worn (how could they be with such a limited issue?) but, rather, nearly all examples were struck with incorrect die spacing, so that hair details are apt to be weak and parallel striations (adjustment marks from planchet preparation) occur on the head. The same characteristic is true of all other stella issues, flowing hair and coiled hair.

Toward the end of 1880, S. K. Harzfeld, a rare coin dealer, interviewed A. Loudon Snowden, superintendent of the Philadelphia Mint, and learned that 180 examples of the 1879 flowing hair stella remained undistributed. Snowden suggested that these be sold to numismatists at $15 each if suitable permission could be obtained from Washington.

At the time there was a considerable furor in the numismatic community relative to the perceived inequities of pattern distribution. It seemed that privileged collectors with connections at the Mint had no trouble in obtaining "fancy pieces," presumably by paying well for them. Many dissatisfactions were expressed in the numismatic press, of which the following quotation, taken from *Numisma*, the house organ of Ed. Frossard, New York dealer, is relevant. While Frossard seems to have been quite taken by Snowden's glib explanations, students today believe that extensive profiteering by Mint officials was the rule, not the exception, and one writer, Don Taxay, has gone so far as to characterize the Mint facilities as being nothing more than a workshop for the gain of those who had access to dies. The *Numisma* article follows:

> IMPORTANT INTERVIEW BETWEEN MINT SUPERINTENDENT A. LOUDON SNOWDEN AND MR. S. K. HARZFELD.
>
> The report of this interview, herewith published, will be perused with interest by our readers. Col. Snowden manfully and successfully vindicates his action as Mint superintendent in the matter of the issue of metric sets [1879 $4 flowing hair stellas], and takes the occasion to show a better and much more favorable light on some past and obscure transactions at the Mint. By his concession to the numismatic public of the pertinency of inquiry into Mint affairs, Col. Snowden — unlike the majority of office holders — avows himself open to legitimate complaints and frankly acknowledges that fair criticism is not unworthy of his careful consideration. The result of the interview is satisfactory in every point of view; it clears Col. Snowden of personal aspersions lately made from several quarters, honors Mr. Harzfeld by showing that the latter's complaints were not altogether "much ado about nothing," and is a compliment to "Numisma" by the determination to publish in its columns a communication which would have been eagerly accepted and published by many papers with a wider circulation, but not a more earnest desire to place facts pertaining to any subject discussed in their true light.
>
> PHILADELPHIA, OCT. 12, 1880.
>
> Almost simultaneously with the September number of "Numisma" I received a letter from A. Loudon Snowden of the U. S. Mint, inviting me to call upon him and afford him an opportunity of presenting the facts and making some explanation which would, as he thought, put a different look on the case I presented in my correspondence as published in "Numisma."
>
> My interview with Col. Snowden was highly satisfactory. He is too sensible a gentleman to deny what cannot be denied, but his explanation of matters has to be taken in respectful consideration.
>
> Col. Snowden admitted that 415 metric sets of 1879 were struck, 400 of them in 1880. The order was given by the Committee on Coinage early this year, and there being no hubs to duplicate the dies, the old dies with date 1879 were used.
>
> The whole issue was against the judgment of the director and superintendent, but they had to obey the order of the Congressional Committee. The dies were ordered by the Committee as were also the pieces struck therefrom, and in no sense did either come within the regulations for the issue of pattern pieces. The superintendent was much opposed to the issue in the large quantities demanded, but was powerless as his orders came through the director of the Mint from the Coinage Committee. No pieces were issued, retained, or sold by the superintendent, nor can he or any other Mint official be justly held responsible for the issue.
>
> As to the 150 sets still in the vaults of the Mint, the question arises whether they shall be melted up, as some propose, or sold to numismatists generally. In the first case collectors would still be more in the hands of speculators than before. I therefore suggested the sale of the sets at $15.00, and Col. Snowden promised to support my proposition at Washington if on my part I would secure the endorsement of this proposition by our leading numismatic societies or prominent numismatists.
>
> Coming to the other point, the restrike of $20,000 worth of coins and patterns [the reference here is made to issues other than the $4 stellas], Mr. Snowden emphatically denied this. He did not deny that restrikes were formerly issued at the Mint. When his uncle, the late Mr. James Ross Snowden, was director of the Mint some coins, patterns, and experimental pieces were restruck to exchange for other coins and medals needed in completing the Mint Col-

ection. None of them were retained by the director, but they were used exclusively for the purpose named.

About this period an old employee of the Mint, relative of one of the first and most valuable officers of the Mint, who had charge of the dies in the engraver's department, was discovered by the sales made by an erring son to have taken impressions from 1804 [silver dollar] and some other dies. [The reference apparently is to Theodore Eckfeldt.] On this discovery vigorous efforts were put forth to recover the coins, and it is believed that most, if not all, were returned and destroyed, and precautions were taken to prevent a reoccurrence of a like error. Several of these dies were destroyed, and the balance — four or five in number — were boxed and sealed up and placed in the director's vault where they remained unopened into the year 1868, during the directorship of Dr. Linderman, when under authority from the Treasury Department four or five impressions were struck from each of the dies which were then destroyed. Previously Col. A. L. Snowden, who was then chief coiner, had all the old and experimental dies, numbering over 700, destroyed by fire and the sledgehammer, in the presence of three persons. From these dies not a single impression was taken, although Col. Snowden now deeply regrets this decision for some impressions were not had for the Mint Cabinet, as among the dies were some by Gobrecht, from which no known impression is in existence.

"I have been," says Col. Snowden, "connected with the Mint since my boyhood and value its well-being and honor, and I would not now, nor have I ever participated in anything calculated to bring discredit upon the institution. I have always felt an interest in assisting legitimate coin collectors, but have constantly resisted favoritism. What I have done in the matter of destroying all dies of all previous years was in their interest — to prevent their improper use in the future. There are no dies now in the Mint dated previous to 1880 except the metric and stella and goloid dies of 1879, which are held subject to the orders of the Committee on Coinage. I am not only always open to suggestions but would invite expressions of opinions from all respectable numismatists."

"If you have any complaints to make or suggestions to submit, come to me and you will always receive a respectful hearing."

I cheerfully accept the explanations of Col. Snowden and believe them to be frank and full . . .

S. K. Harzfeld.

Today numismatists take little note of the fact that most 1879-dated stellas of the flowing hair style were actually struck in 1880. While the pieces may indeed be restrikes in a technical sense, the pieces were produced with full disclosure and apparently under conditions of necessity, for 1880-dated dies seemingly were not ready. There have been countless other incidents of dies being used *near* the date indicated, without any nefarious purpose, with modern examples being the restriking of Lincoln cents during the "penny shortage" of the 1960s and the making in even more modern times of 1776-1976 dated bicentennial coins in years after the bicentennial observation.

Although the 1879 flowing hair stella and related issues are patterns, by tradition they have been incorporated into the regular series, thus giving numismatists the opportunity to include this unusual denomination in their type sets.

The precise number of 1879 flowing hair stellas minted is not known. The quantity of 15 struck in 1879 plus 400 produced in 1880 has been mentioned many times in print, but others have placed the number at 500 or even 600 (the latter being W. Elliot Woodward's estimate). Although all were struck as Proofs, the majority of pieces seen today show impairments of one sort or another. Many show signs of having been used as jewelry. Walter Breen has published that these were favorite items "adorning the persons of Washington, D. C. madams who received them from Congressional visitors to their bordellos."

In 1880 a number of 1880-dated stellas utilizing Barber's flowing hair design were struck. Here again the precise number made is not known. Some have placed the figure at 15, but a mintage figure of 50 may well be closer to the truth. David Akers estimates "that approximately 25 1880 flowing hair stellas are known. This means that this pattern is 12 to 15 times as rare as the 1879 flowing hair stella" (of the latter Akers estimates that "at least 300 to 350 are still around"). Apart from the date, the 1880 issue is identical to the 1879 production.

Much rarer than the Barber-designed stella of 1879 is the companion piece done by George T. Morgan. Although the inscriptions on the Morgan pattern are similar to the Barber issue, the head of Liberty is done in a different manner, with coiled and braided hair. A somewhat similar design was produced by Morgan for a pattern goloid (an alloy containing gold, silver, and copper) metric dollar.

George T. Morgan is one of the most famous Mint engravers, at least from the viewpoint of numismatists today, because of his 1878 silver dollar design. Born in Birmingham, England in 1845, Morgan subsequently attended the Birm-

ingham Art School and then the South Kensington Art School. Later he studied as a pupil of Wyon at the Royal Mint in London. In 1876 Dr. Henry R. Linderman, director of the Mint, induced Morgan to come to Philadelphia to assist Chief Engraver William Barber. A man of many interests, Morgan was a founder of the Belmont Cricket Club in West Philadelphia, a member of the Philadelphia Sketch Club, a life member of the Philadelphia Academy of Fine Arts, and was active in church affairs.

His numismatic credits are many and include the reverse of the 1892 commemorative half dollar made for the World's Columbian Exposition, the 1915-S Panama Pacific quarter eagle (done in collaboration with Charles E. Barber) the reverse of the 1916 McKinley Memorial gold dollar, and the obverse of the 1918 Lincoln-Illinois Centennial half dollar. Portraits of presidents Hayes, Cleveland, and Harrison were done for the Assay Commission medals of 1880, 1886, and 1893. On his own and also in certain instances with Charles E. Barber, he produced portraits for many issues in the presidential series of medals issued by the Mint.

At the Mint he worked as an assistant under William Barber and Charles Barber until the latter's death in 1917, after which time Morgan was appointed to the post of chief engraver, an office which he held until his death on January 4, 1925, at the age of 79, by which time he had worked at the Mint 48 years.

Morgan's 1878 dollar design, produced in a hurry following the adoption of the Bland-Allison Act, received wide criticism at the time of issue. Linderman noted:

> Whilst the head on the obverse of the silver dollar is very good indeed, the eagle on the reverse looks a little as if it had been drawn from a model instead of life, and it is evident that the artist has suffered from the necessity of crowding so much in a limited space.
>
> The wreath under the eagle rather unduly competes with the bird, and I think that the Old English letters might have been omitted and modern letters used in their place . . .

Others said that it was hardly artistic, in fact it was quite ugly, with one designating the eagle as a "turkey." George T. Morgan was stung by the criticism and sought to produce a silver dollar of lasting beauty. As a result the 1879 "Schoolgirl" and 1889 "Shield Earring" dollars were made. Both are considered by present-day collectors to be among the most beautiful coins ever produced within the confines of the Philadelphia Mint but, alas, they never were struck beyond a limited number of patterns. Morgan's silver dollar went on to be produced by the hundreds of millions until the design was discontinued in 1921.

Morgan's 1879 coiled hair stella is a major rarity. The original production is not known, but the figure 10 has appeared in print many times. It is likely that more were produced, but still the issue was limited. David Akers estimates that 13 to 15 examples are known today, placing it among America's prime gold rarities.

In 1880 additional coiled hair stellas were struck, these with the 1880 date. Again the mintage figure of 10 has been recorded, but the actual number is unknown. Scholars believe the 1880 coiled hair style to be the rarest of all four stella issues (1879 and 1880 flowing hair, 1879 and 1880 coiled hair). David Akers was able to trace the existence of only nine coins.

While type set collectors desiring examples of the flowing hair stella design can be satisfied with an 1879, of which several hundred exist, the coiled hair stella is a different story entirely. Only at widely spaced intervals does the opportunity to acquire an 1879 coiled hair stella present itself, and appearances of the exceedingly rare 1880 coiled hair are even more infrequent.

Today the $4 gold piece, never issued for circulation and long forgotten by the public — buried with the idea of international gold coinage — is perhaps the most famous of all denominations.

Half Eagles

9

The $5 gold half eagle series extending from 1795 to 1929 is particularly remarkable for the extreme rarities it contains. Prime among these is the 1822, a coin of which just three are known and of which but a solitary example remains in private hands (the other two are in the Smithsonian Institution). Of the 1825/4 overdate only two are known, and among certain other issues, particularly of the 1820s and 1830s, are numbered other extreme rarities.

On August 8, 1786 Congress proposed a coinage system which included two gold denominations, a half eagle ($5) to contain 123.134 grains of pure gold and an eagle to contain 246.268 grains. It was noted that these denominations were to be "stamped with the impression of the American eagle." While the August 8th proposal was being considered, William Barton suggested another coinage system which employed a $5 gold piece as well as silver coins expressed in shillings. No tangible results came from either proposal.

The Mint Act of April 2, 1792, the legislation which set standards for coins subsequently produced by the new Philadelphia Mint, provided for a half eagle of 135 grains weight, consisting of 123¾ grains pure gold with the remainder being an alloy of silver and copper (silver was a common natural impurity in gold and could not be removed easily using refining processes of the time).

Coinage of copper cents and half cents for circulation commenced in 1793, but production of denominations in precious metals was prevented by the requirement that the chief coiner and assayer each post personal bonds in the amount of $10,000, a sum which neither could afford. In *The U.S. Mint and Coinage* Don Taxay quotes a December 30, 1793 letter from Thomas Jefferson to President George Washington on the subject:

> I am informed by the director of the Mint that an impediment has arisen to the coinage of the precious metals which it is my duty to lay before you.
>
> It will be recollected that in pursuance of the authority vested in the president by Congress, to procure artists from abroad, if necessary, a Mr. Drotz [actually Droz], at Paris, so well known by the superior style of his coinage, was engaged for our Mint; but that after occasioning to us a considerable delay, he declined coming. That thereupon our minister at London, according [to] the instructions he had received, endeavored to procure there a chief coiner and assayer; that is, to the latter, he succeeded, sending over a Mr. Albion Coxe [actually Cox], for that office but that he could procure no person there more qualified to discharge the duties of chief coiner, than might be had here; and therefore he did not engage one. The duties of this last office have consequently been hitherto performed, and well performed, by Henry Voight [actually Voigt], an artist of the United States, but the law requiring these officers to give a security in the sum of 10,000 dollars each, neither is able to do it. The coinage of the precious metal has therefore been prevented for some time past, though in order that the Mint might not be entirely idle, the coinage of copper has been going on, the trust in that, at any one point of time being of but small amount.
>
> It now remains to determine how this difficulty is to be got over. If by discharging these officers and seeking others it may well be doubted if any can be found in the United States, equally capable of fulfilling their duties; and to seek them from abroad, would still add to the delay; and if found either at home or abroad, they must still be of the description of artists, whose circumstances & connections rarely enable them to give security in so large a sum. The other alternative would be to lessen the securityship in money, and to confide that it be supplied by the vigilance of the director, who, leaving as small masses of metal in the hands of the officers at any one time, as the course of

the processes will admit, may reduce the risk to what would not be considerable . . .

Congress on March 30, 1794 reduced the bond of the assayer to $1000 and the chief coiner to $5000. Cox and Voigt had their surety posted by others, and coinage of precious metals was permitted to ensue. In the same year the first silver coins, silver dollars and half dollars, were produced. The first gold production came in 1795.

Around May 1795 David Rittenhouse, director of the Mint, assigned engraver Robert Scot to produce half eagle dies. Rittenhouse left the Mint at the end of June and was replaced by Henry William DeSaussure, who ordered that gold coin production should begin. On July 31st 744 half eagles were delivered, followed by subsequent deliveries through September 16th totalling 8,707 pieces for the year.

The first designs were of what collectors designate today as the capped bust to right obverse, small eagle reverse style. While the inspiration for Miss Liberty's cap has been attributed to classical and other sources, a letter dated February 14, 1825 from Director Samuel Moore to Thomas Jefferson (who at that time was living at Monticello), as quoted by Walter Breen, notes in part:

> The character of the impression emblematic of Liberty on our coins does not appear, from any record I have seen, to have been determined by specific instructions from the government; nor has it been settled by any uniform practice here. The journals of the Senate, and other notices of the proceedings of Congress, show that the head of the president was at first intended as the device for one side of the coins; and that the House of Representatives substituted the words now in the law. But neither the journals nor the brief notices which the papers contain of the debates of that period give any indication of the precise emblem intended.
>
> The first coins struck were cents of 1793, on which the emblem adopted was a female head, with hair wildly flying behind. [Subsequently] the cap of Liberty was introduced supported on a wand projected behind the head. In 1796 or '97 the cap was discarded and has not since been restored.
>
> In 1794 the first silver coins were struck. The head of Liberty was here also adopted with flowing hair, without the accompaniment of a cap. This style was retained on the silver coins, with slight modifications, until about the year 1808 [actually 1807], when Mr. Patterson procured a more pleasing head of Liberty and ornamented it with a dress [referring to the cap] not intended, as I learned from officers of the Mint, to represent the cap of Liberty [the reference here is to the Liberty cap given to freed slaves as a badge of distinction in ancient times], nor approaching it in form, but taken from life and considered a model in good taste of the fashion of the time . . .
>
> The first gold coins were struck in 1795. The head on them was, from the first, ornamented with a cap head dress; not the Liberty cap in form, but probably conforming to the fashionable dress of the day . . .

Walter Breen relates that the "small eagle" reverse design used on $5 (and also $10) pieces of 1795 was taken from:

> a first century B.C. Roman onyx cameo in the Kunsthistorisches Museum, of the same period as the famous Gemma Augustea and possibly by the same master. On this cameo — number 4 in Eichler-Kris' catalogue of antique cameos in this museum . . . the eagle stands to the right, rather than breast outwards, but it agrees with Scot's design for our gold coins in having eagle on a palm branch and holding a circular wreath in his beak, his wings outstretched.

The coinage of 8,707 half eagles was accomplished by using numerous dies, including at least nine reverse dies with the small eagle motif alone. One of these contains a curious blunder. The word STATES on the reverse was first engraved as STATED and then corrected, with the result that examples show the final S over an erroneous D.

The small eagle reverse style was continued through early 1798. In 1796 a mintage of 6,196 pieces was reported, apparently from a single pair of dies. The obverse is an overdate, 1796/5, made from an unused die of the previous year. It is possible that certain pieces included in the 1796 production figures were actually dated 1795, for specimens of the 1796/5 are much rarer than the mintage would indicate.

In 1797 two main varieties with the small eagle reverse were struck, one with 15 stars on the obverse and the other with 16.

In 1798 the small eagle motif was discontinued. In that year only a few specimens of the early style were produced, thus creating one of the greatest rarities in the series. The existence of only seven specimens has been documented, to the writer's knowledge:

1. The Ten Eyck example sold by B. Max Mehl for $5250, an incredible sum, in 1922. Later owned by Col. E. H. R. Green, King Farouk, and Farish Baldenhofer.

2. The Raymond L. Caldwell coin illustrated in *The Numismatist* in 1935, page 212. Later in the

PLATE 15

TEN DOLLAR GOLD PIECES

Specimens from the collection of MR. SILAS WODELL

FIVE DOLLAR GOLD PIECES

Selections from the collection of MR. WM. H. WOODIN

A page from the catalogue issued in 1914 by the American Numismatic Society (New York City) to accompany its exhibit of rare coins held that year. Displayed were outstanding examples from the Society's own collection as well as pieces borrowed from individual members. Shown here are $10 (above) and $5 pieces

Flanagan Collection, then in the James A. Stack estate.

3. The John A. Butler coin owned by Butler, a Burlington, New Jersey druggist around the turn of the century. The piece later passed to his son. In 1909 when Edgar H. Adams published a study of the series this was one of just two examples of the variety known to him. Later in the Earle Collection, then to Col. James W. Ellsworth, then to William Cutler Atwater.

4. The Davis-Graves coin sold by Stack's in 1954, then to C. T. Weihman. Considered by Walter Breen to possibly have been the same as the Rev. Foster Ely Collection piece sold in 1886.

5. The George Woodside specimen. Appeared in the Lorin G. Parmelee Sale as Lot 758. Now in the Smithsonian Institution.

6. The Louis Eliasberg Collection coin sold by B. Max Mehl in 1924 to John H. Clapp, then to the famous Maryland numismatist.

7. The Mickley specimen first traced to Joseph J. Mickley, America's pioneer numismatist. Later in the collection of William Sumner Appleton, then to T. Harrison Garrett. Sold at auction in November 1979 by Bowers and Ruddy Galleries.

An interesting article concerning this particular piece appeared in *The Numismatist*, April 1935, and illustrated coin number two mentioned above. The story, "1798 Half Eagle With Small Eagle Reverse," by Raymond L. Caldwell, is herewith excerpted:

> On November 17, 1888 there was sold at public auction in New York City, by Bangs & Company, a collection of United States gold coins belonging to Rev. Foster Ely, D. D. The collection was catalogued by the Scott Stamp and Coin Company. In it we find the first record of the 1798 half eagle with the small eagle reverse, listed as follows:
>
> "Lot 17. Half eagle, of 1798. Thirteen stars (five facing). Reverse, small eagle. Cut on edge of reverse, otherwise good. A very rare coin, not in the U. S. Mint Collection, one of four known."
>
> Just eighteen months after the Ely sale, on June 25, 26, 27, 1890, Bangs & Company sold the famous Parmelee Collection, catalogued by the New York Stamp and Coin Company. In Lot 758 we find the second specimen of 1798 small eagle half eagle to be offered. This example was described as having "several small scratches, otherwise very good and very rare."
>
> It was exactly 22 years later, June 28, 1912, when the third specimen of this great rarity was offered to collectors. In Henry Chapman's sale of the George Earle Collection it was listed as Lot 2339 and here stated to be "the rarest United States gold coin of the regular series, as but three are known, the U. S. Mint having the Parmelee example and the others' whereabouts are unknown to me." Mr. Chapman inserts a note in the catalogue which states: "The history of this great coin (the Earle specimen) is that it was first known in the hands of Mr. John Butler, a druggist, of Burlington, New Jersey, about 1900, and from his son Mr. Earle purchased it after his father's decease."
>
> In Adams' premium list of United States gold coins, published in 1909, he mentions the Ely specimen and states "only two known. One in the collection of a well-known Philadelphian and the other in the Mint Collection at Philadelphia." Without doubt the "well-known Philadelphian" was Mr. Earle. As Mr. Chapman mentions in his catalogue, the Parmelee specimen is the one in the Mint Collection and Mr. Earle's specimen was obtained in New Jersey, it really leaves the Ely specimen out in Adams' record. It would seem also that the Ely specimen is the third example that Mr. Chapman mentions in the Earle catalogue as "whereabouts unknown" to him.
>
> This Ely specimen did not come into the market again until May 2, 1922, when it was offered at auction by B. Max Mehl in his sale of the James Ten Eyck Collection. It was purchased by the late Waldo Newcomer, of Baltimore, Maryland. In 1932 the Newcomer Collection was offered for sale by Mr. Mehl and in a letter to me some time ago Mr. Mehl says: "I sold his (Mr. Newcomer's) set of gold coins to another collector, which included this great rarity."
>
> The fourth specimen mentioned as known in the Ely Collection has never been offered for sale. I happen to be the owner of it and it is here illustrated for the first time. There is just one other specimen of this great rarity known, and it was discovered by Mr. B. Max Mehl, who writes me that he obtained it "some ten years ago and sold it at private sale at almost its record price."
>
> From the above facts we find that there have been only six chances, either at public auction or private sale, to obtain this great rarity during a period of more than 50 years . . .

With the 1798 $5 with small eagle reverse, the small eagle motif came to an end.

Among the numismatic mysteries of the past century, now unravelled through the efforts of Robert W. Julian, Walter Breen, and others, is the explanation of the existence of the 1795 $5 with the heraldic eagle reverse. The heraldic eagle style, featuring an eagle with wings symmetrically spread with a shield on its breast, stars and clouds above, and holding in its talons arrows and a branch, was first used for regular coinage in *1796* when it appeared on the reverse of the quarter eagle. Walter Breen's explanation of the anomalous 1795 small eagle reverse is stated in

his monograph, *Early United States Half Eagles 1795-1838:*

> We now come to one of the most disputed and paradoxical of all half eagle types, namely the 1795 heraldic. Many have speculated that these pieces were coined in the latter part of 1795 or in 1796. Others have guessed a 1797 or 1798 origin for them. Since the reverses show 16 stars, they cannot be 1795 products. Tennessee — the 16th state of the union — was only admitted June 1, 1796. Before then there would have been no point in making one, let alone two, 16-star dies. Information as to die varieties was for long almost impossible to obtain, because the coins are very rare and not often available for comparison. Nevertheless, the available photographs have solved the problem.
>
> There were three obverse and two reverse dies . . . The reverses, though of different style, clearly are 1797 products since the reversion to 13 stars (found on half eagles of 1798 and after) took place on other denominations during 1797. One of the two half eagle reverses comes cracked in combination with the 1795 obverse and perfect with a [later-dated] 1797 16 star obverse. This proves that these "1795" heraldic coins must have been made, at least some if not all, after the introduction of the 16-star obverse of 1797, which in turn followed at least two 15-star obverses. The last delivery of half eagles in 1797 took place on August 28th. On September 1, 1797, the Mint closed for two months during Philadelphia's annual yellow fever epidemic. Reopening on November 9th, coinage was haphazard, being made under emergency conditions from any dies remaining usable — all having been stored in vaults in the Bank of the United States. There were, however, no more half eagles struck during that year.
>
> We may therefore conclude that the 1795 heraldic half eagles, together with (probably) the 1797/5, were made in 1798 or later. They bear every earmark of hasty striking under emergency conditions, being made from old rusted dies resurrected for the purpose in the full knowledge that they could not last long. Quite likely they were part of the 3,226 half eagles delivered on December 5, 1798 after the Mint's post-epidemic reopening for that year.

As noted earlier in the present text, little thought was given at the time to striking coins with dies dated for the proper year. The numerous instances of date overlapping and related circumstances were not to provide rarities for collectors but were results of Mint economy. Indeed, so far as is known, no American numismatist began studying gold coin dates and varieties until after 1820, with the late 1830s being a more probable date for the inception of interest.

Of the 1795 heraldic eagle reverse it is believed that about three dozen exist today. 1797 half eagles were produced in two major varieties. The first is an overdate, 1797/5, with 15 obverse stars. Like the 1795 large eagle reverse, the issue is believed to have been struck in 1798. It is numbered among the great rarities in the early half eagle series, with just about 10 to 12 specimens traced with certainty. David Akers comments that this issue is "a great rarity, but for some unknown reason it has not been afforded the respect deserved."

The other issue of the year is a unique variety with 16 obverse stars and with a perfect date. David Akers notes that this issue is:

> alone at the top as the rarest U. S. half eagle. The unique specimen now resides in the Lilly Collection in the Smithsonian Institution and so is forever unavailable to collectors. At one time it was in Col. Green's extensive holdings but was withheld when Green's half eagles were sold in 1943 to King Farouk of Egypt, and consequently it never left the United States. Unfortunately, this coin was never really appreciated when it was available. The four auction records traced are all for the same coin, and in none of the four sales was it correctly touted as the unique rarity that it is. In fact, at its last public appearance, the Baldenhofer Sale in 1955, it sold for only $625, less than the price realized by the Extremely Fine 1797/5 and exactly the same as the Extremely Fine 1797 15 star $5. At the same sale the 1798 small eagle $5 brought $6000!

The preceding commentary points out vividly that numismatic research is a constantly evolving field, and new discoveries appear from time to time as do revaluations of earlier data. A related instance is the 1841-O half eagle discussed later in the present text.

From 1798 through 1807 coinage of the heraldic eagle reverse style was continued. Major varieties include the 1798 small 8, 1798 large 8 with 13 star reverse, 1798 large 8 with 14 star reverse, 1799, 1800, 1802/1, 1803/2 (no "perfect date" issues exist for either 1802 or 1803), 1804 small 8, 1804 small 8 over large 8, 1805, 1806 pointed top 6, 1806 round top 6, and 1807. Of these varieties the 1798 large 8 with 14 stars on the reverse is the rarest.

In 1807, following the coinage of some of the old-style pieces, the half eagle was redesigned by John Reich. The obverse was changed to a different portrait of Miss Liberty, wearing a cloth cap, facing to the left. Seven stars are to the left and six to the right. The reverse was redesigned to feature a perched eagle without stars. The new

format was continued through 1812. A quarter eagle (to which refer) of the same design was minted for one year only, 1808. The 1807-1812 style is designated by collectors today as the capped draped bust to left type. Major varieties include 1808, 1808/7 (scarce; only a few dozen are known), 1808, 1809/8, 1810 with small date and small 5 (exceedingly rare; fewer than a half dozen are known), 1810 small date with tall 5, 1810 large date with small 5 (fewer than a half dozen known), 1810 large date with large 5, 1811 small 5, 1811 tall 5, and 1812.

In 1813 the Reich design was modified. The portrait of Miss Liberty was changed to eliminate the bosom and drapery, the stars were rearranged to completely encircle the head, and other obverse and reverse details were altered. The new style, called the capped head to left type by collectors today, was produced from 1813 through 1829. A comparison of the mintage figures of the 1807-1812 type with the mintage figures of the 1813-1829 type indicate that with the exception of 1815, issues of the 1813-1829 style should be scarce in most instances, but not exceedingly rare: 1807 (51,605 minted), 1808 (55,578), 1809 (33,875), 1810 (100,287), 1811 (99,581), 1812 (58,087), 1813 (95,428), 1814 (15,454), 1815 (635), 1818 (48,588), 1819 (51,723), 1820 (263,806), 1821 (34,641), 1822 (17,796), 1823 (14,485), 1824 (17,340), 1825 (29,060), 1826 (18,069), 1827 (24,913), 1828 (28,029), and 1829 (57,442).

In actuality the mintage figures for the 1813-1829 years bear little relation to the rarity of the coins today. The most famous of all half eagle rarities, the 1822, of which just three specimens are known to exist, was minted to the extent of 17,796 pieces, a figure more than the 14,485 recorded for 1823, of which dozens of examples are known! The reason for the rarity of half eagles of this style lies not with any mintage figure explanation but, rather, with what happened to the coins after they were struck and the relationship of gold and silver prices in the world market.

In the late eighteenth century Alexander Hamilton, secretary of the Treasury, posted the ratio of silver to gold value as 15 to 1. Under this system, 15 ounces of silver could be exchanged for one ounce of gold, or vice versa. As time went on silver was mined in ever increasing quantities, with vast stores coming from Mexico, Central America, and South America, while gold was produced to a much lesser extent (nineteenth-century discoveries of gold, particularly in California, would later change the situation). By 1799 the ratio of gold prices to silver increased to 15 ¾ to 1 on the exchanges in England and Germany. As supplies of silver continued to increase, silver became "common" in relation to gold, with the result that holders of silver wanted to exchange it for gold, and holders of gold were reluctant to do so, at least at "official" rates. As the United States Mint did not adjust its standards, freshly-minted gold coins could be melted and the bullion sold at a profit in terms of silver. Walter Breen cites a reference to public assays held in Paris in 1831 in which approximately 40,000 American half eagles "of recent mintage" had been melted. One can only presume that the same thing happened to the majority of the other coins produced during the period. To rectify this untenable situation Congress lowered the weight of gold coins in the summer of 1834, but not before virtually the entire production of early years passed into the hands of speculators and bullion dealers.

Among half eagles of the period the first year of the design, 1813, is the most plentiful. It is believed that several hundred exist, still rare in absolute terms but on a relative basis common. 1814 exists only in overdate form, 1814/3, and is moderately scarce.

First on the list of great rarities of this design type is the famous 1815. During the nineteenth century this was considered to be *the* rarest and most desirable half eagle. Today this distinction belongs to the 1822, which has received tremendous additional publicity since the turn of the century. During the nineteenth century the rarity of the 1822 was relatively unappreciated by numismatists, simply because the opportunity did not occur to feature them prominently in catalogues from time to time. Still, today the 1815 retains an aura accorded to few other American issues. David Akers in *United States Gold Coins, An Analysis of Auction Records, Volume IV,* notes that "a few other coins, even of this type, may be more rare, but with the exception of the 1822 half eagle, it's unlikely that any other United States gold coin is more desirable." The 1815 has enjoyed a venerated position in the pantheon of American numismatics. The appearance of a specimen on the market has always been

1815.	Extremely fine, Stickney, 1907	$2,000.00
1815.	Very fair, Jenks, 1883	52.00
1815.	Very fine, Adams, 1876	150.00
1818.	Extremely fine, Stickney, 1907	20.00
1819.	Extremely fine, Smith, 1906	550.00
1819.	Fine, Low, 1907	650.00
1819.	Very fine, Stickney, 1907	560.00
1820.	(Curled "2.") Extremely fine, Stickney, 1907	30.00
1820.	(Square "2.") Uncirculated, Wilson, 1907	34.00
1820.	Extremely fine, Wilcox, 1901	18.00
1821.	Uncirculated, Smith, 1906	300.00
1821.	Extremely fine, Stickney, 1907	200.00
1821.	Perfect, Jewett, 1909	275.00
1822.	Very fine, Smith, 1906	2,165.00
1823.	Uncirculated, Smith, 1906	21.00
1823.	Very fine, Stickney, 1907	16.00
1824.	Very fine, Smith, 1906	120.00
1824.	Very fine, Jewett, 1909	165.00
1825.	(Over '21.) Very fine, Smith, 1906	70.00
1825.	Extremely fine, Wilson, 1907	100.00
1826.	Extremely fine, Wilson, 1907	35.00
1826.	Uncirculated, Stickney, 1907	60.00
1827.	Extremely fine, Smith, 1906	260.00
1827.	Extremely fine, Stickney, 1907	350.00
1828.	(Over '27.) Extremely fine, Wilson	240.00
1829.	(Large date.) Uncirculated, Wilson	240.00
1829.	(Small date.) Extremely fine, Wilson	210.00
1829.	(Small date.) Extremely fine, Stickney, 1907	360.00
1830.	Extremely fine, Wilson, 1907	35.00
1830.	Very fine, Wilcox, 1901	31.00
1831.	Uncirculated, Smith, 1906	60.00
1831.	Extremely fine, Wilcox, 1901	40.00
1831.	Very fine, Jewett, 1909	60.00
1832.	Very fine, Smith, 1907	230.00
1832.	Extremely fine, Steigerwalt, 1907	310.00

The values of early half eagles as priced "Adams' Official Premium List of United States Private and Territorial Gold Coins," 1909. At the time half eagles of this span were perhaps the most intensely collected of all gold issues. The prices shown are auction records of the period.

greeted with a combination of delight, reverence, and awe. It is worth noting that the 1815 half eagle was conspicuously absent from the William F. Dunham Collection auction by B. Max Mehl in 1941, the last public appearance of the venerated 1822.

Walter Breen has traced the whereabouts of 12 examples, with the rumor of a 13th:

1. The Smithsonian Institution coin, acquired by the Mint Cabinet at auction on December 4, 1885. During the 1880s the Mint Cabinet participated in various public auction sales in order to augment its holdings. The results of these forays into the public market were reported in *The American Journal of Numismatics* at the time.

2. The Swedish Mint Museum coin, Stockholm. Formerly owned by the Swedish king.

3. The Garrett Collection coin sold at auction by Bowers and Ruddy Galleries in November 1979. Earlier acquired from Harold P. Newlin, October 31, 1884, and before that the property of W. Elliot Woodward. The book the present writer produced in connection with the Garrett offering, *The History of United States Coinage As Illustrated by the Garrett Collection*, reproduces a number of correspondence items pertaining to the 1815 half eagle.

4. The Mitchelson coin from the J. C. Mitchelson estate, now on view at the Connecticut State Library and Museum, Hartford.

5. The coin purchased by Louis Eliasberg as part of the John H. Clapp Collection. Following the acquisition of this collection, it became the well-known Baltimore numismatist's ambition to obtain one each of every major United States date and mintmark variety.

6. The Col. E. H. R. Green coin, later in the collection of King Farouk of Egypt, and still later appearing in the Farish Baldenhofer Sale. Col. Green, who once owned all five known examples of the 1913 Liberty head nickel at the same time, was perhaps the most eccentric major buyer of coins of the present century. King Farouk, another owner, certainly came a close second in this regard.

7. The Amon Carter coin presently in the collection of Amon Carter, Jr. of Fort Worth, Texas. The earlier pedigree is not certain. Walter Breen speculates that it may have been a duplicate sold by Louis Eliasberg, earlier from the Clapp Collection, earlier from the Lorin G. Parmelee Collection, and still earlier from Col. Mendes I. Cohen.

8. The Atwater coin, earlier owned by B. Max Mehl, H. O. Granberg, William H. Woodin, Col. James W. Ellsworth, and Waldo C. Newcomer.

9. The Walton coin from the George Walton estate. Earlier from the Clifford Smith Collection. Still earlier in the Davis-Graves Sale by Stack's.

10. A specimen once owned by Virgil Brand, the numismatist who began his interest in 1889 and who intensely assembled many United States and world coins, including numerous duplicates, until his death in 1926.

11. The James Ten Eyck Collection coin sold by B. Max Mehl in 1922. Walter Breen speculates that the same piece may have appeared in the Bell Collection sold in 1944.

12. The Clinton Hester Collection coin. Earlier in the "Memorable" Collection sold by Abner Kreisberg and Abe Kosoff.

13. The specimen known to Walter Breen only by rumor. Allegedly in well-worn condition.

In his monograph on the denomination Walter Breen quotes information from Bullion Journal "C" in the National Archives which notes that on June 24, 1815 Thomas Parker deposited standard gold valued at $337.44, on July 3rd Charles Kalkman deposited gold valued at $1054, and on October 30th the Bank of Pennsylvania deposited gold valued at $328.03½. Also on October 30th the treasurer at the Mint sent to the melter and refiner gold coins and bullion from the above deposits, debiting him with $1719.47½ in gold. This metal, together with some on hand from the previous year, was subjected to the normal process. On November 3rd the coiner struck and delivered 635 half eagles plus three additional specimens reserved for the Assay Commission (which subsequently met on February 12, 1816). It is further related that on December 31 $3661.33 in gold fit for coining remained uncoined at the Mint. Less than two weeks later, on January 11, 1816, a fire damaged certain Mint apparatus, making it impossible to roll metal strips or cut planchets from them. As a result coinage in 1816 was limited only to cents (the planchets for which were imported from England). No gold or silver pieces were made. Accordingly, it seems reasonable to assume that the 635 half eagles

reported coined in 1815 represent the true mintage of the year and furnish a direct explanation of the rarity of the piece.

No $5 pieces were minted in 1816 or 1817. Half eagles of the following year 1818, scarce today, exist in several die varieties, including one with STATESOF appearing on the reverse as a single word and another die blunder with the denomination expressed as 5D over 50. In the latter instance the diecutter apparently was daydreaming, thought he was working on a half dollar die, noticed the error, and then corrected it. The same reverse die outlived the 1818 production and was subsequently used in combination with an 1819 obverse.

The year 1819 marks another famous half eagle in the parade of rarities characterizing the era. There are two major varieties, one from "perfect dies" and the other with the 5D/50 blunder. It is believed that fewer than 20 specimens of the 1819 half eagle exist.

B. Max Mehl, the colorful Fort Worth, Texas dealer who was unquestionably the most prominent professional numismatist in America during the first half of the twentieth century, never believed in brevity and was always inclined to use a paragraph when others settled for a few words or a sentence. Likewise, titles and captions for rarities in his sales were apt to be lengthy, but undoubtedly it was precisely this that endeared so many collectors to him and his style. The 1819 half eagle in the 1941 Dunham Sale was described with a title in capital letters with an exclamation mark at the end: "THE EXCEEDINGLY RARE 1819 HALF EAGLE — ONE OF OUR REALLY GREAT RARITIES!"

His text description, here quoted in part, is likewise enthusiastic:

> The second rarest United States half eagle, next in rarity to the matchless 1822, has always been considered to be the 1815 half eagle. The 1819 has always been recognized as the third rarest of the entire series. But from the records of the number of specimens offered in the past 50 years, I believe that while the 1815 is and should be rated as the second rarest half eagle, but from the same records it is certainly evident that the 1819 is — if not as rare as the 1815 — is most certainly a mighty close second.
>
> From 1890 to the present time [1941] there were offered at auction three specimens of the 1815 half eagle. The first in the Harlan P. Smith Sale, where the coin brought $1050. The next specimen sold was in the following year, 1907, in the Matthew A. Stickney Sale, where the coin sold for $2000. The third specimen was in my sale of the famous James Ten Eyck Collection, in 1922, where the 1815 half eagle brought $2200 plus 5% [commission charge to the buyer].
>
> Since my sale of the Ten Eyck Collection, in May 1922, not another 1815 half eagle has been offered at auction. However, I have handled and sold three specimens at private sale during this period, although two of these specimens were previously sold at auction and were not newly discovered or additional specimens.
>
> During the same period of numismatic history, from 1890 until the present time [1941], more than 50 years, there were only four specimens of the 1819 half eagle offered at auction — just one more than were offered of the 1815 . . .
>
> Since my sale of the Ten Eyck Collection in 1922 I can find no record of a single other specimen having been offered at auction. Although I have had four 1815 half eagles pass through my hands during the same period, handling one of them twice, making a total of six sales of 1815 half eagles, I have had in my 40 years in the numismatic business but two 1819 half eagles.
>
> So, from [my records] it can be very easily noted that the 1819 is just about on a par in rarity and value with the 1815 half eagle, which has an auction record of well over $2200, and a record at private sale of over $4000! Then, truly, the 1819 half eagle can certainly be classed among the really great American numismatic rarities.

Half eagles of the following year, 1820, exist in three major varieties: curved base 2 with small letters on reverse, curved base 2 with large letters on reverse, and square base 2. Each variety is rare, with the about 100 known specimens of the 1820 date being approximately divided 25% each for the two varieties with curved base 2 and 50% for the square base 2.

The following year, 1821, is rarer still, with approximately 24 to 30 known to exist. In the Dunham Sale in 1941, which contained a parade of half eagle rarities, Max Mehl noted that the 1821 was "one of the real great rarities of this series and one which has not been sufficiently appreciated . . . I doubt if as many as 12 specimens are known in collections . . . a most beautiful and thrilling coin to own!"

The next coin on the list, the 1822 half eagle, is far and away the most famous American gold issue. While the 1870-S $3 is equal in rarity so far as the number in private hands (just one) the 1822 had one advantage the 1870-S did not: B. Max Mehl handled one at auction! Not a man to waste superlatives, Mehl reached the pinnacle of his

CATALOGUE

OF THE

FINEST EXISTING COLLECTION

OF

AMERICAN · COINS,

THE PROPERTY OF

MR. LORIN G. PARMELEE,

of Boston, Mass.

THE WHOLE TO BE SOLD AT PUBLIC AUCTION

WITHOUT RESERVE,

BY

Messrs. BANGS & Co., Auctioneers,

739 & 741 BROADWAY, NEW YORK CITY,

ON

Wednesday, Thursday and Friday,

JUNE 25TH, 26TH, 27TH, 1890,

AT **2** O'CLOCK, P. M., SHARP, EACH DAY.

The Coins for each day's sale will be on exhibition from 10 A. M. to 1 P. M.

Sale of June 26th begins at Lot 516.

Sale of June 27th begins at Lot 1003.

ORDERS EXECUTED BY ALL DEALERS AND THE AUCTIONEERS.

Catalogued by the NEW YORK COIN & STAMP CO.,

H. P. SMITH. 853 BROADWAY, NEW YORK. D. PROSKEY.

Cover of the Parmelee Collection sale, 1890, catalogued by David Proskey of the New York Coin & Stamp Co. Although the event was described as "without reserve," the consignor was one of the main bidders.

1821.

40.00 930 Half Eagle: sharp and uncirculated; very rare.
22 00 931 Quarter Eagle: sharp and perfect proof; extremely rare.
1.40 932 Half Dollar: sharp and uncirc.; with brilliant proof surface.
4.00 933 Quarter Dollar: sharp and uncirc.
9.50 934 Dime: large date: sharp: uncirc.; with brilliant proof surface.
3.00 935 Dime: small date: sharp; barely touched by circulation.
40.00 936 Cent: sharp, beautiful impression: reddish color: proof surface: very minute nicks: otherwise would pass for a perfect proof; very rare.
30.00 937 Cent: different obv., die: sharp: uncirc.: bright red; rare.

1822.

900.00 938 Half Eagle: stars sharp: numerous minute nicks: fine: the first and only one ever offered at public sale; awfully rare from way back.
75 939 Half Dollar: sharp and perfect; uncirc.
80 940 Half Dollar: different die; very fine and sharp.
6.75 941 Quarter Dollar: some stars rounded: otherwise sharp; uncirc.; scarce in this condition.
36 00 942 Dime: barely touched by circulation; exceedingly rare in this condition.
13.00 943 Cent: compact date: sharp, uncirc.; partially bright; scarce.

1823.

~~944~~ Half Eagle: several slight nicks: otherwise sharp and uncirc.; scarce.
12.25 945 Half Dollar: light nick; otherwise sharp, uncirc.
1.15 946 Half Dollars: different dies: very fine and sharp, with proof surface; 2 pcs.
132.00 947 Quarter Dollar: fine: very little circulated: this is excelled by only one specimen known to us; exceedingly rare.
6 75 948 Dime: sharp and uncirc.
75 00 949 Cent: some stars rounded, otherwise sharp proof; exceedingly rare.
6.50 950 Cent: mule of 1823: obv., and rev., of about 1816: similar pieces have been declared authentic by Philadelphia mint officials: evidently an early impression showing no cracks of the die; very fine.

A page from the auction of the Parmelee Collection, 1890. The cataloguer, David Proskey, gave minimal descriptions to the various pieces. The 1822 $5, described as "awfully rare from way back," proved to be a counterfeit. Another numismatist loaned an example of an 1822 for the sale and subsequently bought it back when it crossed the auction block.

Minimal publicity given to the auction plus brief descriptions combined to make the Parmelee Sale one of the notable non-events of its time. Parmelee himself bought many coins back and parceled them out in a series of private transactions over the next several years.

career when he described Lot 2095 in the Dunham Sale in 1941, titling the offering: "THE RAREST AND MOST VALUABLE COIN OF THE ENTIRE UNITED STATES SERIES! (Probably The Rarest Coin In The World)."

And, Mehl's enthusiasm was well founded, for today the light is no less brilliant. Recently David Akers noted that "the legendary 1822 half eagle is the most famous and desirable United States gold coin. It traded hands at fantastic prices when other great rarities that are now worth six-figure prices were bringing mere pittances. There are three known specimens, two permanently impounded in the Smithsonian Institution and one in the Louis Eliasberg Collection . . . all three specimens are in the Very Fine to Extremely Fine range, with the Eliasberg specimen being the finest of the three."

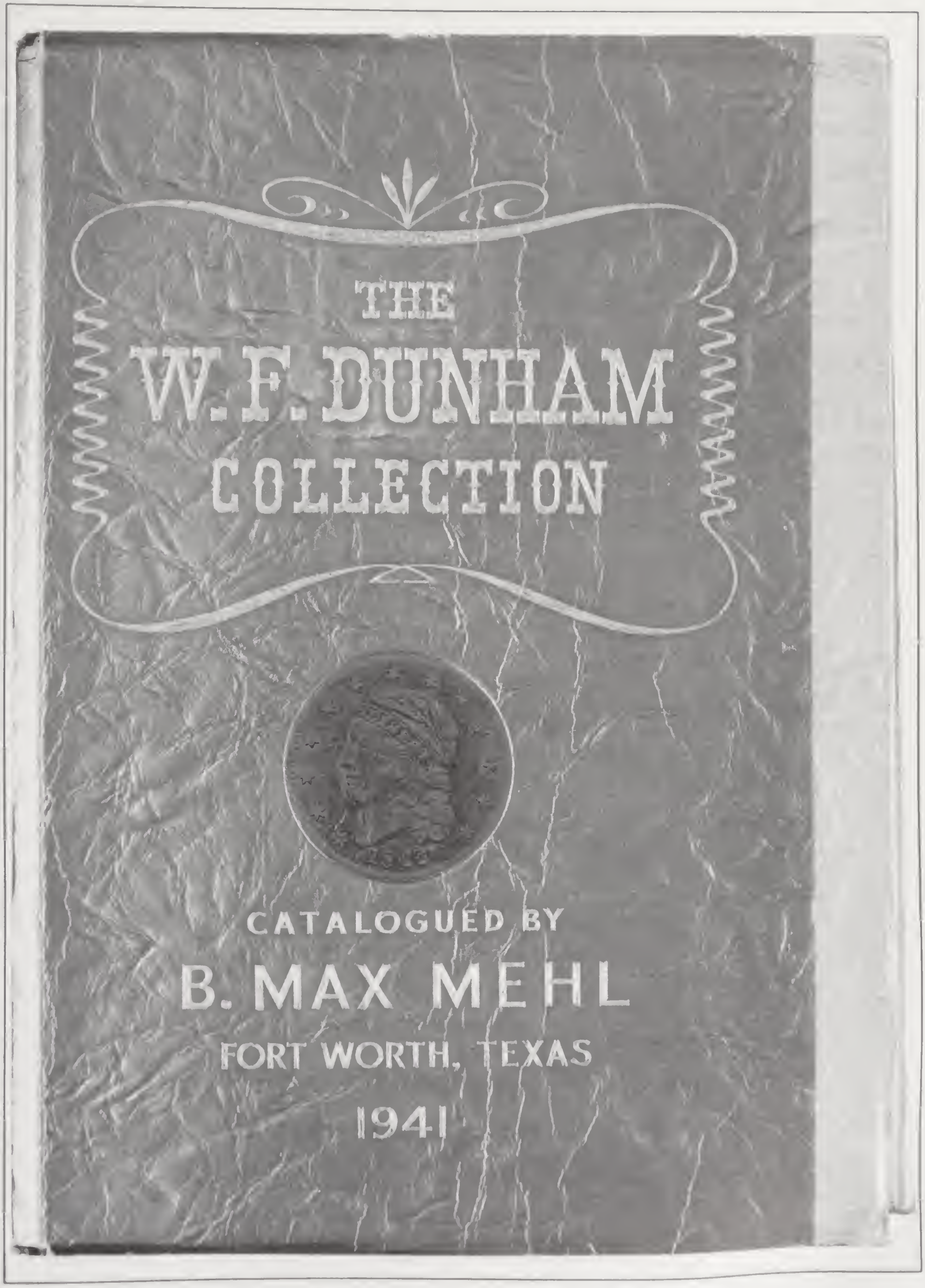
Mint reports indicate that 17,796 specimens were struck of the 1822 half eagle. It is probable that some of these were from earlier dies, possibly dated 1820 or 1821. And, it is virtually a certainty that however many 1822-dated half eagles were made, most were melted for their bullion value. Today only three specimens are known to exist:

1. The first specimen acquired by the Smithsonian Institution. Earlier on display as part of the U. S. Mint Collection, Philadelphia, where it was an attraction for many years. Believed to have been given to the Mint by Adam Eckfeldt circa 1838 when he donated a 1787 Brasher doubloon and other desirable items to form the nucleus of the exhibit.

2. The second specimen in the Smithsonian Institution was earlier in the Dunham Collection and was vividly described by B. Max Mehl in that 1941 offering. Mehl's description of this piece is reprinted later in the present chapter. Appearing as Lot 2095 in the Dunham Sale, the coin attracted the attention of Amon Carter, a prominent citizen of Fort Worth, Texas, with interests in real estate, publishing, and oil, and who was the co-founder of American Airlines. For years Mehl had heard of Carter's wealth and was intrigued with the possibility of securing him as a client. At a meeting of the Rotary Club Mehl gave Carter an 1879 gold quarter eagle, the date of the latter's birth, in a special case. Carter was intrigued and inquired as to what other 1879 coins could be obtained. Mehl then sold him a scarce issue: an 1879 flowing hair stella. From that point Carter's collection grew. Usually Mehl had to enlist his showmanship ability to make sales, but his efforts were magnificently rewarded. Unlike most other dealers of the time, most of Mehl's auctions were conducted by mail bid only, with no public or "floor" participation. Each sale had a number of lots which either were not bid on or which had bids which were too low to be acceptable. In several instances Mehl simply sold these remaining coins en bloc to Carter! The 1822 half eagle, purchased at $11,575 by Carter, remained in his collection until his death, upon which time it passed to his son, Amon Carter, Jr. Then in the early 1960s it was sold in a private transaction to Josiah K. Lilly, an Indiana pharmaceutical executive. When Lilly died and his estate was probated in the 1960s, the entire collection was given to the Smithsonian Institution in exchange for favorable tax treatment (which involved special legislation).

3. The Louis Eliasberg Collection specimen which was owned by Virgil Brand, the wealthy Chicago brewer who died in 1926. It subsequently passed to Horace Louis Philip Brand, his brother, and was sold to Eliasberg for $14,000 by Abe Kosoff in July 1945. Brand acquired it on May 5, 1899 from M. David, of 53 Clinton Place, New York City.

The Dunham Collection will forever remain one of America's landmark sales. Formed by William Forrester Dunham of Chicago, Illinois, the collection was purchased intact by B. Max Mehl. To raise funds, Mehl offered certain items in the collection for sale, including the 1822 half eagle (which was offered to John Work Garrett, of Baltimore, Maryland, who was in the declining years of his life at the time and who passed the opportunity; Garrett died in 1942), and the collection of Hard Times tokens (which was sold intact in advance of the sale but which appeared in the sale catalogue anyway together with "prices realized" in the list issued after the sale). What items were sold in advance and what items actually were auctioned may never be known, but for certain the majority of the pieces did find new buyers after the Tuesday, June 3, 1941 deadline. So proud was Mehl of his accomplishment that the prices realized list contained the following notice, complete with the traditional exclamation marks:



Cover of the W. F. Dunham Collection catalogued by B. Max Mehl, 1941.
Illustrated is the 1822 half eagle.

The grand total of the sale is $83,364.08! This is the largest amount, by more than 35%, than ever before realized at a coin sale in America. The Jenks Sale, in 1921, brought $61,379.46. The average per lot in the Dunham Sale was $20!

One cannot help but wonder what B. Max Mehl, who died in 1957, might have said when he learned of the $25 million realized by the sale of the Garrett Collection by Bowers & Ruddy Galleries in a series of four auctions comprising 2,354 lots, held 1979-1981, for a realization of approximately $10,500 per lot!

As the 1822 is the most acclaimed of all American coins, it seems appropriate to quote Mehl's description of the piece here, the 1941 Dunham Sale listing representing the most recent time an example of the coin has changed hands at auction:

THE RAREST AND MOST VALUABLE COIN OF THE ENTIRE UNITED STATES SERIES! (Probably The Rarest Coin In The World)

THE 1822 HALF-EAGLE OR FIVE-DOLLAR GOLD PIECE.

1822 $5.00 Gold! Obverse; head of Liberty wearing cap facing to left with the word LIBERTY incused or stamped in on band. 13 six-pointed stars; date, 1822, below head.

Reverse; eagle with outstretched wings, head turned to right (reader's left). U. S. shield on breast, and olive sprig in eagle's right talon and three arrows in left talon; the value, 5D. below. Motto, E PLURIBUS UNUM, incused or stamped in on scroll above eagle between tips of wings. Legend UNITED STATES OF AMERICA. Milled borders and milled edge. Condition: just a shade from Uncirculated with considerable, in fact, almost full original brilliant mint lustre. Of greatest rarity. [Grading standards have tightened since then, and in 1979 David Akers graded the same piece as VF-EF.]

Lot number 2095.

THE HISTORY, PEDIGREE AND RARITY OF THIS GREAT COIN:

We have authenticated history of numismatics in this country for a period extending back to about 1817 — 124 years. And during all these years — extending over a period covering more than a century — there is only one record of this great coin having ever been offered and sold. This was in 1906, when this identical coin was sold in the Harlan P. Smith Sale. It was bought by William Forrester Dunham, in whose collection it remained until this time, a period of 35 years.

The sale, as mentioned before, was that of the famous Harlan P. Smith Collection. It was catalogued and sold by the then long established firm of numismatists, S. H. & H. Chapman, in Philadelphia. The coin was catalogued as Lot number 210 and described as follows:

"—Of highest rarity, surpassing all other dates of this denomination. We know of but three specimens: U. S. Mint, Virgil M. Brand, and the present example was in the Parmelee Sale 1890, where it was loaned by H. P. Smith, to take the place of Parmelee's specimen which has proved to be counterfeit."

The price paid by Mr. Dunham was $2,165.00, which was, up to that time, the highest price a single United States coin ever sold for! We must also remember that this was 35 years ago!

A number of years ago, while in Chicago, Mr. Dunham told me that some year or two after his coming into possession of this great coin, a representative or agent of the late J. Pierpont Morgan called on him and urged him to part with the coin, finally offering him $35,000 cash for it. This incident was later, and just recently, verified to me by Mr. Henri Ripstra of Chicago (immediate past president of the American Numismatic Association), who informs me that he was present in Mr. Dunham's office when the offer was made by the representative of Mr. Morgan.

Another most interesting incident relating to the great rarity of the 1822 half eagle is that of a letter written by the great numismatist, Matthew A. Stickney, Salem, Massachusetts, bringing out the fact that through all of the recorded numismatic history of the United States, extending over a period of 124 years, not a single other specimen of the 1822 half eagle has been offered for sale.

In the catalogue of the great Stickney Collection, sold in June 1907, there was a letter published of Mr. Stickney, written July 2, 1867. The letter refers mainly to his 1804 dollar, but there is one statement in the letter which greatly emphasizes the rarity of the 1822 half eagle. The paragraph referred to reads as follows:

"I have been for nearly 50 years a systematic collector of coins; and for a very long period, almost without a competitor; and very many of the rare coins which now enrich other cabinets were, by great solicitation, obtained from me. My facilities for collecting coins were remarkably good, through the friendship of Beebee & Parshell's Bullion Exchange, 22½ Wall Street, New York. I received from them, quarterly, from 1843, rare coins I was in search of, at par; and under the changes of the firm they continued to favor me until 1854, when, in consequence of ill health, I gave up my business."

From the above statement it will be noted that Mr. Stickney began collecting coins in 1817. For 50 years — one half century — he was in his own words "a systematic collector of coins," and again using his own words, his "facilities for collecting coins were remarkably good." His collection, when sold in 1907, realized the then highest sum ever before realized for a coin collection in this country, that of $37,859.21. His collection contained such great rarities as the Brasher doubloon, which brought $6200 — a new

HALF EAGLES; PHILADELPHIA MINT

370

	Estimate Price	*Selling Price*
370—1821. Another excessively rare Half Eagle, this example is uncirculated and a splendid addition to any collection. The Bell coin, very fine, sold for $725.00, this one should top	$1000.00	$800.00

The 1822 Half Eagle

We are not privileged with the opportunity to offer this outstanding rarity. The 1822 Half Eagle was never included in this Collection, but that statement can be applied to almost every great collection ever formed.

As far as is known, there are but three specimens of the 1822 Half Eagle. One is in the United States Mint Collection—and this leaves but two. In 1941, one of these was offered in the Dunham Sale. Mr. Dunham had acquired it in 1906 in the Sale of the Harlan P. Smith Collection sold by S. H. and H. Chapman for a record price of $2,165.00. Apparently, this coin was destined to set record prices for United States Coins, for in the Dunham Sale it sold for $11,575.00.

Now, again the record price for a single coin involves the 1822 Half Eagle. The NUMISMATIC GALLERY proudly records the private sale of the Brand Specimen of the 1822 Half Eagle for $14,000.00. Up to this writing, the highest price ever paid for any individual coin, it reposes in the cabinet of one of America's outstanding collections.

The sale of the "World's Greatest Collection" by the Numismatic Gallery in 1946 did not include an 1822 half eagle, but the cataloguers could not resist mentioning this famous rarity as the catalogue page reproduced above demonstrates.

high record for a single American coin! The collection also contained all of the rarest American colonial coins; all United States gold, silver and copper coins of the Philadelphia Mint, including all half eagles, with the ONLY exception of the 1822 half eagle. In his 50 years of collecting when, in his own words, he was "almost without a competitor," he did not have a single opportunity of securing the 1822 half eagle.

Another bit of important evidence relative to the great rarity of the 1822 half eagle is found in the book published by the famous dealer Charles Steigerwalt of Lancaster, Pennsylvania. This book was published in 1884, 57 years ago. In listing the United States $5 gold pieces, where the 1822 is mentioned, he states very definitely *but two known*. Referring, of course, to the specimen here offered, which was then in the Smith Collection and the other in the United States Mint Collection, which, of course, is out of the market for all time.

And during the later years, after Mr. Stickney discontinued his collecting, there were many other great collectors with unlimited funds, such as Parmelee, Mills, Zabriskie, Earle, Jenks, and many others, whose collections included all of the great American rarities, but none of them had an opportunity of acquiring an 1822 half eagle.

Then in still later years, or we might say modern times, we had other great collectors, such as Mr. Granberg of Wisconsin, to whom the price of a coin mattered not if he lacked it in his collection; William H. Woodin (late secretary of the Treasury of the United States), who specialized and formed the most complete collection of United States half eagles ever brought together; Col. E. H. R. Green, whose numismatic holdings totalled at least two million dollars or more; Mr. Waldo Newcomer, whose numismatic collection cost him nearly a million dollars; and several other wealthy and advanced collectors. While these gentlemen possessed everything else in the United States rarities they ALL lacked the 1822 half eagle.

In fact, back in 1925, when the late Col. E. H. R. Green was actively interested in completing his numismatic collection of the United States coinage, he was willing to buy the entire Dunham Collection and pay nearly $100,000 in order just to acquire the 1822 half eagle. But Mr. Dunham refused to part with any of his coins as they were "his life," as he expressed it to me at the time.

The above are all recorded and proven facts which do not require much imagination to realize the really great rarity and value of this pedigreed 1822 half eagle! The only authenticated specimen ever to have been offered, and having been offered for sale at auction only once during the entire period of more than a century of American numismatic history.

The pride of its possession and ownership cannot be overestimated. The great enhancement in value which this rarity will influence the values of other coins in a collection is untold and inestimable. This great coin has always been and always will be the finest dream of ownership of American collectors and a dream which may be realized not only once in a lifetime — but once in several lifetimes!

After 1822 the half eagles of the same decade are a parade of rarities. While none has been accorded the fame of the 1822, each in its own right is sufficiently rare that if it were part of another series or if it were surrounded by common coins it would be highly acclaimed. Studying half eagles of the 1813-1829 type is like contemplating a gallery full of Rembrandts: one's sense of perspective is lost.

Concerning the 1823 half eagle, David Akers sums up this feeling by stating that it is "a very rare coin but is still one of the more 'common' dates of this type . . ." In this instance, common means perhaps 40 to 50 specimens totally. 1824 is even rarer, with approximately 20 known to exist. This estimate may be on the generous side, for when Walter Breen studied the series and published his findings in 1966 he was able to trace just ten different examples.

Of the 1825 half eagle two varieties are known, both overdates. The 1825/1 has a known population, according to Walter Breen, in the range of 15 to 20 examples, thus placing it in the forefront of American rarities.

Rarer still is the 1825/4. But two specimens are known of this coin:

1. The example with prooflike surface in the Louis Eliasberg Collection, earlier from the 1912 sale of the George Earle Collection, and still earlier from the 1875 sale of the Col. Mendes I. Cohen Collection.

2. The Kaufman coin. Although this coin appeared in the John Story Jenks Collection in 1921, the piece was nearly forgotten in later years. Then in the 1970s it came to light again. The coin, described by David Akers as "Very Fine with several tiny edge marks where it was held by tacks for display on a wall," was rediscovered by Harry X Boosel, who appraised the collection which had been long hidden and long forgotten in the vaults of a Marquette, Michigan bank. Although subsequent court litigation called certain facts concerning the earlier ownership into question, apparently N. M. Kaufman, who was associated with the bank, publicly displayed the collection there during the early twentieth cen-

cury. In a curious non-numismatic fashion the various pieces in the Kaufman holdings, including Proof coins, were tacked to boards! Following Kaufman's death the coins were stored for a period of decades in the bank vaults, with the bank stating that it had title to them by virtue of a previous arrangement with the owner. In 1978 the collection was auctioned by Rarcoa, of Chicago, and the 1825/4 half eagle was sold to the Kagin Coin Company for $140,000.

The 1825/4 half eagle is an outstanding example of a coin which has been closeted over the years. B. Max Mehl never owned one, so there was never the opportunity to create pages of ecstatic prose extolling its virtues. Time has a way of correcting inequalities, so probably in some future year the 1825/4 will be recognized for its true status as one of the very rarest major varieties in the American gold series.

Next in the parade of "rarest of the rare" issues of the 1820s comes the 1826, a coin of which approximately two to three dozen are known to exist. From this year onward most of the few remaining coins of the various dates of this type are in Uncirculated grade or close to it, verifying that these pieces did not circulate actively. Virtually any coin introduced into the channels of commerce would have been snapped up by a bullion dealer or alert banker and melted for a profit.

The 1827 half eagle is another rarity, a date for which Walter Breen traces ten different specimens. Allowing for pieces not examined by Breen, the population still is probably in the range of a dozen. David Akers estimates that "at most 20 specimens exist."

Another great rarity is represented by 1828/7, the overdate. Fewer than a dozen specimens can be traced with certainty. This may be a generous estimate, for Walter Breen believes the number to be closer to seven or eight, of which the Eliasberg Collection coin is the finest. Here is another half eagle which has suffered from lack of exposure and publicity. By way of comparison, it is far rarer than an 1804 silver dollar (a coin of which hundreds of pages of commentary have been written and of which 15 examples are known to exist).

The 1828 non-overdate half eagle, the so-called "perfect date," is another classic rarity. Fewer than a dozen of these are believed to exist as well, although the perfect date appears slightly more often than the 1828/7 overdate. The distinction is academic for each is a rarity of impressive magnitude. David Akers notes that:

> The 1828 with the normal or perfect date is a classic United States gold coin rarity. In my opinion, it is slightly less rare than the 1828/7, and comparable to the legendary 1815. It is definitely more rare than the 1819, a date that has received more attention and notoriety over the years than the two varieties of 1828. I would estimate that approximately 12 to 15 specimens exist . . .

The rarity of the 1828 half eagle was not lost to B. Max Mehl who in 1941 described Lot 2101 of the Dunham Collection as follows:

> THE EXCESSIVELY RARE HALF EAGLE OF 1828.
>
> 1828 $5 gold. Perfect date variety. Brilliant semi-Proof, sharp, with raised border and just about equal to a perfect Brilliant Proof.
>
> There has been so much limelight directed on the great rarity of the 1815, 1819, and 1822 half eagles — while justly so — that the excessive rarity of the 1828 half eagle and a few of the other extremely rare dates of the half eagles of the 1820s has been overlooked.
>
> The record of the 1828 half eagle is just as impressive and proves it to be just about as rare as the 1819 and a close neighbor in rarity and value to the 1815!
>
> The first specimen of the 1828 half eagle offered in this country was the Harlan P. Smith Sale in 1906, where the overdate variety brought $210. And in the same sale a perfect date specimen, the same as here offered, sold for $240. In the Stickney Sale, in 1907, just one year later, we find a specimen of the overdate variety sold for $360, an advance or increase in value of more than 66% in one year.
>
> The next great collection sold was the George H. Earle, in 1912. Although this collection realized a huge sum (especially at that time, 29 years ago) of $55,821.63, it did not have a single specimen of the 1828 half eagle.
>
> From 1907 to 1922, a period of 15 years, I can find no record of a sale of an 1828 $5 gold piece. Then in my sale of the James Ten Eyck Collection, in 1922, an Extremely Fine specimen brought $680 plus 5% commission, for a total of $714. An increase of nearly 100% in value over its previous record.
>
> From 1922 down to the present time [1941], there is only one record of an overdate variety, which brought $960, but I can find no record in any of the important sales held during these past 19 years where a single specimen of the perfect date 1828 half eagle has been offered. Nor do I recall, nor do I have any record of having sold a specimen at private sale with the only exception of the one in the Waldo Newcomer Collection, nine years ago, which incidentally was one of the specimens previously sold at auction in

the sales above mentioned. No new specimens having come to light.

Therefore, from the above records, it can readily be noted that during the past 50 years there were just as few, if not fewer, 1828 half eagles offered than were offered of the 1815 and of the 1819. I feel now, as I have always felt, regarding the excessive rarity of the 1828 half eagle, that it is just as rare and just as difficult to obtain and is as seldom offered and certainly on about a par in value with the 1815 and 1819 half eagles.

Following the 1828 comes the last issue of the 1813-1829 design format, the 1829 large planchet (25 millimeters diameter) variety. This is the third rarest half eagle of the design, exceeded only by the 1822 and the 1825/4. Only a half dozen or so examples are known. Walter Breen traced the location of five coins: (1) Omaha City Library, (2) Eliasberg Collection, (3) Dr. Clifford Smith Collection, (4) Atwater Collection, and (5) 1964 ANA convention auction. To that list can be added the Garrett Collection coin which appeared as Lot 471 in the Garrett Sale of November 1979.

Like certain other rarities, the 1829 large planchet half eagle gave B. Max Mehl the opportunity to exercise his enthusiasm. Concerning Mehl's description of the William C. Atwater coin, Walter Breen noted that the cataloguer "neglected to name pedigree or even grade in a description occupying some 26 lines."

Following coinage of the 1829 large planchet variety the design was slightly modified and the diameter was reduced from 25 to 22.5 millimeters. Using Reich's design William Kneass, Mint engraver, restyled the portrait slightly. Various minor differences can be noted upon comparing specimens of the later type with those of the earlier, with the diameter and with differences in the edge denticles being the most noticeable. The new half eagle variety was struck with beaded borders and with a closed collar. The style parallels that used on the 1831 half cent, 1829 half dime, second variety of the 1828 dime, etc. Traditionally the early 1829 variety has been called the large *date* variety and the later one the small date variety. However, the planchet diameter is a more prominent distinction than the date size, so the present writer agrees with the large and small planchet designations used by Walter Breen and others. This style was continued from 1829 through the summer of 1834. As is the case with the 1813-1829 type, the half eagles minted from 1829 through 1834 are exceedingly rare.

Of the 1829 small planchet coins fewer than ten can be traced today. In 1966 Walter Breen identified six separate specimens. David Akers has estimated that there are 10 to 12 known specimens and observed that "the small planchet type is less rare than the large planchet type but is still a great rarity, more rare in fact than the 1815, 1828, or 1819."

An earlier variation of the Akers remarks were printed by B. Max Mehl in his Dunham description of the coin, excerpted herewith:

THE EXCESSIVELY RARE UNITED STATES HALF EAGLE OF 1829. SECOND TYPE, SMALLER PLANCHET AND DATE — THE RAREST VARIETY.

1829 $5 gold. The exceedingly rare variety with small date and small letters on the reverse. The edge is beaded instead of serrated as in previous years. The entire coin is on a trifle smaller planchet, being of the same size as are the half eagles of 1830-1834 . . . Of excessive rarity. In fact, one of the rarest of all our gold coins.

The record of this beautiful and exceedingly rare half eagle is even more impressive than that of the exceedingly rare half eagles of 1815, 1819, and 1828 . . . Since the Ten Eyck Sale in 1922, 19 years ago [as of 1941], I know of no record of sale at auction, and only one record at private sale, the specimen in the Newcomer Collection . . . In all of my 40 years of numismatic business, although I have made four sales of 1815 half eagles, and have handled three of the 1819, and many other great rarities, including three Brasher doubloons; in fact, as stated elsewhere in this catalogue, I have now had the pleasure and satisfaction of having had passed through my hands each and every date, mintmark, and principal variety of every coin minted for circulation by all the United States mints. But during all of these years this is only the third specimen of the 1829 half eagle that I have ever handled. It is really the second, as the other two sales were of the same coin.

Surely, if we consider all the important facts and records pertaining to the excessive rarity of the 1829 half eagle, small date variety, it cannot by any stretch of our imagination be placed on a lesser degree of rarity and value than that of the 1815 and 1819 half eagles!

Next in order come two varieties of the 1830 half eagle, one with the denomination 5D with a small numeral and letter and the other with the denomination larger. It is believed that three or four dozen examples exist of the Small 5D coin and perhaps two dozen to three dozen of the second variety.

1831 is likewise rare, with two or three dozen known to exist. Mintages from 1829 through the end of the type increased sharply, mainly due to the influx of gold from North Carolina and Georgia (which furnished the *raison d'etre* for the Bechtler coinage discussed in the earlier chapter on gold dollars). Still, half eagles from this era remain exceedingly rare due to melting at the time.

Of the 1832 half eagle there are two varieties. The first, with a curved base 2 in the date and with 12 stars on the obverse, is one of the most curious in the series. While many blundered dies exist throughout nineteenth-century numismatics, star counts are not prominent among them. The 1817 15-star large cent and 1828 12-star half cent have defied explanation, and the 1832 12-star half eagle does likewise. Daydreaming one day at the Mint? An incompetent or unskilled assistant engraver? The answer will probably never be known. It is known, however, that the issue is one of the rarest in numismatics. David Akers enumerates six specimens, of which three are impounded in institutions:

1. The Smithsonian Institution example.

2. Another Smithsonian example, a plugged Very Fine coin formerly from the Jenks Collection.

3. The Eliasberg Collection coin.

4. The Byron Reed Collection coin.

5. The specimen from the Farouk Collection, earlier from Col. E. H. R. Green.

6. A specimen owned in 1977 by Charles Varner.

The second variety of the year, the 1832 with square base 2 in the date and 13 obverse stars, is less rare. It is believed that about two dozen exist. The term *rare* loses its meaning when describing early half eagles of this period, for even the most "common" issue would be *exceedingly rare* if placed in another context, say among United States cents.

Of the 1833 half eagle there are two date sizes, designated by Walter Breen as the small date and large date varieties. While they are "naked-eye types" as Breen puts it, few if any collectors have ever made a distinction. It is believed that two to three dozen 1833 half eagles exist today.

Ending the coinage of this type are two varieties of 1834 coins, one with a plain 4 in the date and the other with a crosslet 4. It is estimated that approximately 30 specimens are known of the former and 20 of the latter.

In 1834 the half eagle was redesigned by William Kneass who created what is known today as the *Classic Head* style. The authorized weight was reduced from 135 grains to 129 grains in an effort, which proved successful, to stem the tide of melting coins as soon as they were released and to permit them to once again circulate. At the time a profit of approximately 6% could be made by melting down a freshly minted half eagle. To quickly differentiate the new style from the old one, the motto E PLURIBUS UNUM was omitted from the reverse. Refer to the chapter on quarter eagles for a detailed discussion of the design change.

Like its predecessor, the 1834 Classic Head quarter eagle exists with two date varieties, plain 4 and crosslet 4. Neither is particularly rare. A record quantity of 657,460 half eagles was produced of the new design, by far the highest number minted of any date within the type. The quantity is explained by several factors, including the conversion of undistributed heavy old-style coins, the depositing of old-style coins by the public (who earned a profit on each piece), by gold shipments received from France as an indemnity, and by the increase in gold production in North Carolina and Georgia. Among the undistributed old-style coins from earlier times were 24,568 examples of the 1834 pieces of the earlier design, which were held back and then sent to the melter and refiner on June 30th.

Quantities were large of subsequent half eagles of this type: 1835 (371,534 minted), 1836 (553,147), and 1837 (207,121). In 1838 286,588 were struck at the Philadelphia Mint. For the first time coins were struck at branch mints, Charlotte (17,179 pieces) and Dahlonega (20,583). Appropriate C and D mintmarks appeared on the obverse above the date. As its mintage indicates, the 1838-C is the scarcest half eagle of the 1834-1838 design.

In 1839 the half eagle was redesigned by Christian Gobrecht. The so-called (by collectors today) *Braided Hair* or *Coronet* type featured a smaller head of Miss Liberty with her hair styled compactly, tied at the back with a string of beads. On the reverse the eagle is more compact. The denomination from this point onward is expressed as FIVE D instead of the old 5D. The first year of

issue, 1839, is distinctive on two counts. First, the head is slightly differently executed than that used in 1840 and later and, second, in 1839 mintmarks appear on the obverse above the date, whereas in later years they are on the reverse below the eagle. After 1842 and 1843 (there is some interchanging of varieties within these two years) the letters on the reverse were enlarged. The reverse was again changed in 1866 when the motto IN GOD WE TRUST was added. The coronet style was minted continuously through 1908. This range of half eagle coinage has a unique distinction not accorded any other coin type or denomination: specimens were struck from time to time at each of the seven United States mints: Philadelphia, Carson City, Charlotte, Dahlonega, Denver, New Orleans, and San Francisco.

In 1839 coinage was accomplished at Philadelphia, Charlotte, and Dahlonega. As noted, the C and D mintmarks appeared on the obverse. In 1840 the mintmark location was shifted to the reverse, and the Charlotte, Dahlonega, and New Orleans issues of that year bear an identifying letter below the eagle. In 1840 two distinct varieties of half eagles were produced at the various mints, the so-called "broad mill" and "narrow mill" referring to the size of the rim or border. The broad mill varieties have a wider border similar to that used on all issues of 1839. The narrow style was used from 1840 to the end of the series.

Charlotte and Dahlonega issues were produced throughout the 1840s with the exception of 1845-C. All half eagles of the 1840s are elusive in higher grades, with the Charlotte and Dahlonega pieces being particularly so. Philadelphia issues were produced continuously, and New Orleans issues were produced most years. A major numismatic mystery surrounds the 1841-O, a coin whose very existence is controversial. David Akers' published commentary states the situation as it is at the present time:

> This date is the "mystery coin" of the half eagle series. Although the mint record states that 8,350 were struck, it is now known that *at least* 8,300 were actually dated 1840. In recent years it has been assumed that the remaining 50 pieces in the mintage figure were legitimate 1841-O half eagles, and that two of these fifty were "known to exist." The two pieces are supposed to be (1) the coin mentioned by Columbus, Ohio dealer R. L. Speice in a letter to *The Numismatist* (October 1938 issue) and (2) the specimen in the Col. Green collection. It is my opinion, however, that the legendary 1841-O does not now exist and in fact never did.
>
> When preparing the manuscript for this book [David Akers' *United States Gold Coins, An Analysis of Auction Records, Volume IV*] and attempting to obtain a photo of each issue, I found myself without a photo of the 1841-O, the only photo I lacked. I contacted Stack's in New York because I knew that they had a complete photographic record of Col. Green's collection of half eagles which was sold virtually intact to King Farouk in 1943. Also, Walter Breen had indicated in his monograph that he had seen the photo of the 1841-O in with Green's half eagles. Stack's graciously sent me the photo book and on carefully going through the photos I noticed that the supposed "1841-O" was in reality an 1841-C. Col. Green's collection did *not*, in fact, contain an 1841-O.
>
> I next checked out R. L. Speice's letter to *The Numismatist* wherein he claimed to have an example of the 1841-O. In his letter, Speice asked how he should go about having the coin authenticated since some collectors he had shown the piece to felt it had been altered from an 1841-C! Speice made some other rather ludicrous die comparisons to justify the authenticity of his coin, but except for a subsequent letter in which he said the Mint had told him that such an alteration was not possible (an inaccurate statement!) the coin was never seen or heard of again. It is my opinion that the coin was found to be false.
>
> So there are the stories of the two "known" 1841-O half eagles. Both of them are just that, stories, and neither leads to a tangible, authenticated 1841-O. Perhaps some day someone will bring forth a legitimate 1841-O half eagle. However, it will not be one of the two previously claimed to exist and, until I actually see one and am thereby convinced otherwise, it is my contention that the 1841-O half eagle is a coin that never really existed.

The present writer had a somewhat related experience in 1961 when a prominent numismatist, equipped with "opinions of experts," offered an "1841-O" half eagle for sale and valued it at several thousand dollars, a generous price at the time. Arrangements were made to send the coin to a local bank and open the package in the presence of several bank officers. This was done, after which time it took but a few seconds with a strong magnifying glass to determine that the coin had been altered from an 1841-C, and not an expert alteration at that.

The following year issues, the 1842 small letters, 1842 large letters, 1842-C small date, 1842-C large date, 1842-D small date, small letters, and 1842-D large date, large letters, not to overlook the 1842-O (all specimens of which have small letters) furnish an interesting challenge for the

variety collector. The 1842-C small date is considered to be the rarest Charlotte Mint issue of the denomination.

In 1843 the transition in letter sizes continues with 1843 (large letters), 1843-C (small letters), 1843-D (large letters), and two varieties of 1843-O, one with small letters and one with large. 1844 and later half eagles all have large letters. One variety of 1846-D has a sharply doubled mintmark, an engraving error.

Half eagle coinage continued throughout the 1850s with specimens being produced on a regular basis from various mints. In 1854 the San Francisco Mint opened for business, striking silver and gold coins. Only 268 half eagles were struck, of which just three are presently known to exist:

1. The example in the Smithsonian Institution, formerly in the Josiah K. Lilly Collection.

2. The Louis Eliasberg Collection coin, formerly owned by F. C. C. Boyd.

3. The Samuel Wolfson coin.

David Akers' commentary concerning this coin is interesting:

> If a poll were taken of knowledgeable numismatists as to which half eagle they would most like to own, the 1854-S would be a strong contender for top honors along with such famous issues as the 1798 small eagle, 1815, 1822, and 1841-O (if one really exists, which I doubt). From the incredibly low mintage of only 268 pieces (second smallest of the series), only three are presently known to exist . . . The Lilly-Farouk-Green specimen has several prominent rim nicks and scrapes. The Eliasberg specimen was purchased by Mr. Louis Eliasberg in January 1946 for $5500. It was conservatively graded as Extremely Fine when catalogued for the "World's Greatest Collection" Sale, but most dealers and collectors today would call it at least Choice AU. The Wolfson specimen also was graded EF and sold in 1962 for $16,500 . . . I have not personally inspected the Wolfson specimen, but the Eliasberg coin is considerably the better of the other two.

With just two specimens in private hands, the 1854-S half eagle ranks in the very top echelon of prime American numismatic rarities. Decades, even lifetimes, have elapsed between sale appearances.

During the 1860s mintages were reduced, particularly at the Philadelphia Mint, as the Civil War developed. The same conflict closed the doors of the Charlotte and Dahlonega mints in 1861. After the Confederacy seized the Dahlonega facilities some 1861-D half eagles were produced in addition to the 1,597 earlier made by the government but the exact number of additional pieces has not been determined, and as they were struck from the same dies using the same facilities there is no way to distinguish them. Philadelphia coinages remained small as there was no sense issuing coins knowing they would be immediately hoarded. During the time gold coins were in strong demand and sold at a sharp premium in relation to federal paper money. By decade's end the majority of the coinage of half eagles came from the San Francisco Mint, an area close to gold production and less affected by the Civil War.

In 1870 the Carson City Mint struck half eagles for the first time, initiating a production which would continue without interruption through 1884, then again from 1890 through 1893. Little thought was given to preserving specimens at the time of issue, for there were few collectors of mintmark varieties, so virtually all went into circulation. Mint State examples are exceedingly elusive today. In general, during the decade of the 1880s relatively modest numbers of coins were produced at Carson City, with larger quantities issued at Philadelphia and San Francisco. By this time specie payments had been renewed, and gold coins were readily obtainable at banks.

Two important Philadelphia Mint rarities of the 1870s and 1880s are much admired by numismatists, the 1875 of which 200 business strikes and 20 Proofs were made and the 1887 of which just 87 Proofs were struck. After 1887, continuing through the end of the series in 1908, there are no major rarities, although certain of the branch mint issues are elusive in the higher grades. During the last part of the nineteenth century and the first decade of the twentieth, mintages trended sharply upward, with highs of 5,708,802 recorded for 1881, 3,268,000 for 1886-S, and 3,648,000 for 1901-S. There was no sharply increased demand on the part of the public. Rather, the foremost call for these came for use in overseas settlements and bullion transactions. As the coins did not circulate actively, well-worn half eagles of the period are distinctly less common than are Extremely Fine, AU, and Uncirculated pieces exhibiting mint lustre, pieces which have seen some slight wear mainly due to bulk storage and handling.

SAN FRANCISCO (CALIF.) MINT HALF EAGLES

(First issued in 1854; discontinued in 1916.)

		Estimate Price	*Selling Price*
543—	543 **1854** In point of rarity this item is perhaps the rarest of United States Coins. As a matter of fact, only two specimens are known and this is the better of the two. It is extremely fine with sharp lettering, date, and features. There is no reason why this coin should not bring more than the 1822 Half Eagle at the present time. Up to now the demand has not been such that this coin would bring a record price. We know that the demand exists today. Several magnificent collections have been built up during the past three or four years and all but one of the collections lack this 1854 San Francisco Mint Half Eagle. We anticipate keen competition, for these outstanding collectors realize that here is truly a "chance in a lifetime." Once the auctioneer cries "Sold," the coin will probably not be offered again during this generation. Your estimate is as good as ours. In point of value, it should exceed the 1822 which only recently sold for $14,000.00.		$5250.00
544—1855.	Very fine.	$25.00	$15.00
545—1856.	Extremely fine. Edge dent.	$27.50	$18.00

One of just three known specimens of the 1854-S half eagle appeared as Lot 543 of the "World's Greatest Collection of U.S. Gold Coins" auctioned by the Numismatic Gallery in 1946.

In 1906 half eagles were struck for the first time at Denver. Two years later, 1908, the curtain came down on the Coronet style half eagle and the design was discontinued.

Toward the end of 1908 numismatists were surprised to learn of an innovative Indian head design featuring incuse legends and features, the result of Dr. William S. Bigelow's suggestion to President Theodore Roosevelt. As discussed in the chapter on quarter eagles, Roosevelt encouraged Bigelow to pursue the matter and Bela Lyon Pratt, a famous Boston sculptor, was enlisted to prepare the models.

Correspondence presently in the autograph letter collection of James F. Ruddy reveals an interesting exchange between Bigelow and Roosevelt. On September 26, 1908 Roosevelt wrote to Bigelow:

> I enclose you the visible proof of a great service you have rendered the country — and I am speaking with scientific accuracy. Here you will see the five dollar gold piece, the copy of the models you had prepared, and a month hence our five dollar gold pieces that are issued from the mint will all be of this type. This one I send you as the first one struck. It therefore has a peculiar historic interest and I feel you are peculiarly entitled to have it; so please accept it with the compliments of Director Leach and myself.

Apparently Roosevelt contacted Bigelow for his reaction and learned from Bigelow that the letter of September 26th and its enclosure had not arrived, for on October 10th Roosevelt again wrote:

> Here is the registry receipt for the letter in which the coin was enclosed. I am much concerned at its apparent failure to reach you. Are you sure the coin was not in the letter when you received it?

The mystery was solved by a postal investigation, completed on October 14th, which revealed that registered letter number 54521 addressed to Dr. William S. Bigelow at his 56 Beacon Street address in Boston "was received here [at the Boston Post Office] on Sunday, September 27, then sent out on the first trip Monday, September 28, by carrier J. J. Corballis, who returned it with an endorsement to the effect that a notice would reach you [Bigelow] at Tuckernuck, Nantucket, Massachusetts. A notice was sent there immediately, a second notice on September 30, and a third notice on October 3rd, but delivery was not made until October 10."

Bigelow subsequently wrote to Roosevelt:

> At last I have received your kind letter and its enclosure. It had been waiting for me at the Boston PO while I was at Nantucket. The envelope shows that they sent in three notices, but none had reached me.
>
> I am glad you like the coin. It looks very well to me, and I believe the principle to be sound. Time will show. It is a great pleasure and privilege to have the first one struck, and a greater one to have your letter. To be able to render a great service to the country is a result I never dreamed of aspiring to.
>
> I showed the letter & coin to Cabot who went to the PO with me to hunt them up. Being a thrifty person his comment was — I might better keep them together. They'll bring a good price at some sale.
>
> I shall have this sentence cut on a tombstone forthwith & keep it in the storage ware house ready for use at any moment.
>
> The thing would never have been done but for you. The credit is yours.

On December 7, 1908 S. Hudson Chapman, the well-known Philadelphia coin dealer, wrote to Theodore Roosevelt:

> It was the hope of every one that when our new coinage appeared we would have one of great beauty and artistic merit. But the new $5 and $2.50 gold pieces just issued totally lack these qualities, and not only those of beauty, but actually miss the practicability to which every effective beauty in relief has been sacrificed.
>
> The idea of Dr. William S. Bigelow, of Boston, to sink the whole relief below the flat surface of the coin causes it to appear like a design merely incised in the blank, and precludes entirely the effect of miniature bas-relief.
>
> The head of the Indian is without artistic merit, and portrays an Indian who is emaciated, totally unlike the big, strong Indian chiefs I have seen in real life. The treatment of the head is crude and hard, with sharp, abrupt outlines, as if carved by a mere metal chaser; and on the reverse is a reproduction of the Saint-Gaudens' eagle, which represents not our national bird (the white-headed eagle — commonly but erroneously called the bald headed eagle — which has no feathers on its feet), but resembles more closely the golden eagle, which is also indigenous to Europe.
>
> The placing of the design below the surface of the flan, with deeply incised outlines, gives the effect of having been engraved into the metal, and can, therefore, be closely imitated by any metal chaser with the graver, without dies or moulds. And I am certain that if this had been suggested to the Secret Service officials it never would have been issued by the Treasury Department, and the issuance ought to be immediately stopped and the coins recalled, for every one will be in danger of the imitations.
>
> The sunken design, especially the deeply sunken portion of the neck of the Indian, will be a great recep-

tacle for dirt and conveyor of disease, and the coin will be the most unhygienic ever issued.

The principal claim put out for this coin, and which, according to the claim, would appear to be the most important any design can have, is that it will stack. But, alas! even this is not obtained by this means, for I have before me a stack of twenty pieces — $100 — the stack used by cashiers, and it is the most tottering stack of modern coins, rocking to a great degree, and when the table is jarred about four times the upper coins slide off.

They will fall when carried on a bank tray. It is well known that you cannot strike alot of flat blanks and get them perfectly true. As a connoisseur remarked to me, "Coins should be like a table, which we do not make with a flat bottom, but with feet to stand upon, and this result in coins can and always has been obtained by a flat rim."

And then the new coins, being thinner, as the metal is taken up by the full field, they do not make stacks equal in height to the old, and when mixed with the other issue cause the piles to be of unequal height, and the cashier cannot use the height of a stack as a test of count, but must sort this issue out.

The criticism from the bankers is that the first model of the $10 and $20 pieces did not stack firmly should not cause the mint officials to throw all other considerations to the winds, for the firmness in stacking a coin, as stated above, could be obtained by the use of a sufficiently wide and high rim.

These coins will be a disgrace to our country as a monument of our present ideas of art as applied to coinage.

As compared with those of recent issues of European countries, not to mention the beautiful works of the ancient Greek coin engravers, it is an utterly miserable, hideous production, and let us hope that its issue will not be continued and that it will be recalled and remelted . . .

I would suggest as a means of obtaining a competent committee to pass upon designs for coinage, that in the future all designs for coinage be submitted to the American numismatic societies. For instance: the American Numismatic Society of New York . . . and the American Numismatic Association. The matter would then be weighed by men who have devoted their lives or leisure to the study of the art of coinage from the earliest period to the present time, and thus, having a complete purview of the subject, they would be able to judge of the merits of the coins offered, and if such course were adopted we would be saved the mortification of seeing generally the worst designs accepted and the taste of our people degraded, instead of elevated, by the coinage passing through their hands.

The Chapman letter was forwarded to Bigelow, who provided the President with a defense:

Some of Mr. Chapman's criticisms are well founded, others less so. He says that "sinking the relief below the surface makes it look like an incised design and precludes the effect of a bas-relief." This is hardly correct, as Mr. Chapman can readily see for himself in photographs of the Egyptian sculptures . . . The bas-relief effect is accentuated and not diminished by the shadow of the sharp outline.

He says that the head of the Indian is "without artistic merit and portrays an Indian who's emaciated, totally unlike the big, strong Indian chiefs as seen in real life." The answer to this is that the head was taken from a recent photograph of an Indian whose health was excellent. Perhaps Mr. Chapman has in mind the fatter but less characteristic type of Indian sometimes seen on the reservations . . .

The matter of the eagle was thoroughly threshed out at the time of the issue of the Saint-Gaudens coin. That design proved to be an absolute correct representation of the white-headed American eagle, except that the head was, perhaps intentionally, a little small and the leg feathers a little heavy. Both these criticisms Mr. Pratt has met in the present design. Mr. Chapman says that the American eagle has no feathers on its feet. This statement is true, but not exactly new.

"The placing of the coin below the surface of the flan with deeply incised outlines gives the effect of having been engraved into the metal and can, therefore, be closely imitated by any metal chaser by the graver without dies or moulds." This criticism can hardly be taken seriously. If a forger were going to engrave anything he would not waste his labor on a single coin. It would be as easy to engrave a die as coin of any issue.

"The sunken design will be a great receptacle for dirt and conveyor of disease, and the coin will be the most unhygienic ever issued." This remains to be seen. The question of hygiene has more relation to silver coins than gold, as they find their way into dirtier pockets. A dirty gold coin would be an anomaly. I have never happened to see one.

What Mr. Chapman says in regard to the fact of the coins not stacking is perfectly true. I noticed it as soon as they were issued and called Mr. Leach's attention to it. It proved to be due to an accidental warping of the steel die in hardening. Mr. Leach tells me that it can and will be avoided in the future.

"Coins should be like a table, which we do not make with a flat bottom, but with feet to stand upon, and this result in coins can and always has been obtained by a flat rim." This is true, and it is exactly the principle on which the present issue is made. The flat rim extends from the edge of the coin to the edge of the design.

The thickness of the coins after striking depends on the amount of metal displaced by the die. A stronger relief would give greater thickness. I agree with Mr.

Chapman that it would be well if all the coins in circulation were of the same thickness . . .

Apparently Bigelow prepared texts for two letters for Roosevelt to send to Chapman, one perhaps being sharper than the other, for a letter from Roosevelt to Bigelow, December 12, 1908 relates:

I have your letter of the 12th, with enclosures. If you will return Mr. Chapman's letter to me so that I may have his address I shall send him the letter that you designed to have sent him; and oh, how I would have liked to send him the other letter, which you did not design to have sent him!

From the viewpoint of today, well over a half century later, certain of Chapman's criticisms seem to have been well founded. Circulated examples of the Pratt design do indeed accumulate dirt in the crevices. The design, not popular with the public, might have been better had those familiar with coinage been consulted. But then, as now, numismatists' opinions, if solicited (which they rarely are), are most always ignored. Theodore Roosevelt himself looked upon ancient coins and determined that American coinage designs were pale by comparison (more about this in the following chapters on eagles and double eagles). Any Mint official, member of Congress, or anyone else involved with coinage production has but to study past coins — as indeed S. Hudson Chapman did as his life's work — to determine which coins have artistic merit and which do not. While art is often in the eye of the beholder, numismatists in general have felt that many of America's most beautiful coins exist only in pattern form — the 1879 Schoolgirl dollar and the 1882 Shield Earring dollar, both by George T. Morgan, being but two of many examples.

Indian half eagles were minted from 1908 through 1929, with the only mintages below 100,000 pieces being 1908-S (82,000), 1909-O (34,200), and 1911-D (72,500). There were two issues which broke the million mark, 1909-D (3,423,560) and 1911-S (1,416,000). Mintmark issues have the identifying mint letter in *raised* form or relief on the reverse, thus marking this feature as the highest point on the coin, a curious inconsistency with the rest of the design and its original intent.

Among the most desired regular issue varieties of the series are the 1909-O, 1911-D, and 1929. Although 662,000 1929 issues were made, following a lapse in half eagle production after 1916, nearly all of the pieces were withheld from circulation and in the 1930s went to the melting pot. Today 1929 is the rarest Indian head half eagle in terms of the total number of surviving examples.

Proofs were struck on a continuing basis at the Philadelphia Mint from the mid-1850s through 1915. In addition, examples were produced for certain earlier years dating back to 1820. While the writer has personally examined scattered Proofs of the 1820s and 1830s, the number extant of such pieces is fewer than recorded in literature on the subject, especially auction catalogues. Until relatively recent times, when more attention has been paid to grading characteristics and distinguishing differences between business strikes and Proofs, there was a tendency to upgrade rarer issues. Thus, logic notwithstanding, a piece which might be called "prooflike AU" if it were a common date would be called "Proof" because of its rarity. As David Akers points out again and again in his series of auction price studies, grading from years ago simply cannot be relied upon in a consistent manner. Thus, Proofs are rarer than old literature suggests, and Uncirculated pieces are likewise more elusive than auction appearances indicate.

Beginning in 1854 Proof half eagles were produced at Philadelphia each year. Examples of the 1854-1857 years are exceedingly rare or, in some instances, unknown as Walter Breen's *Encyclopedia of United States and Colonial Proof Coins* indicates. It is recorded that a Proof gold set was struck in 1854 and sent to the city of Bremen (Germany), but the location of the set is not known today. It has been theorized that it was broken up, with scattered pieces surfacing in recent times (Walter Breen wrote of the 1854 Proof gold dollar from this set: "What appears to be this piece was recovered in Switzerland and seen at the 1955 ANA convention . . . "), but the half eagle remains untraced. Concerning the 1855 Proof half eagle, Breen notes that Wayte Raymond made a record of the existence of an example, but its present day location is unknown. The same notation is made for the 1856 Proof. Apparently only two specimens have been verified of the 1857 Proof half eagle, the Eliasberg Collection coin and one offered at auction by Stack's in April 1978.

In 1858 Proof coins were first sold openly to the public. Only four or five Proof half eagles of that year are known to exist. Examples of the

following year, 1859, are likewise elusive, with only a half dozen or so traced, including two pieces in the Royal London Mint Collection. This is despite a reported mintage of 80 Proofs for 1859. As noted in earlier comments on gold Proofs of other denominations, mintage figures are often irrelevant in terms of surviving examples. Apparently the Mint struck 80 pieces but perhaps distributed only a dozen or so, if indeed that many. The others were melted.

In 1860 the Mint produced 62 Proof half eagles. However, Walter Breen can trace only six different examples, one of which he believes may be a duplicate listing, and David Akers notes that "Proofs are much more rare than might be expected from the 62 mintage figure. They are every bit as rare as most later Proofs with mintages only half as great. In all probability, a large number of the Proofs were not sold and therefore melted."

As the Mint began to realize that it was futile to strike a larger number of Proofs and then melt them at the end of the year, production figures began to trend downward: 1861 (66 Proofs minted), 1862 (35), 1863 (30), 1864 (50), 1865 (25), 1866 (30), 1867 (50), 1868 (25), 1869 (25), 1870 (35), 1871 (30), 1872 (30), 1873 (25), 1874 (20), 1875 (20), 1876 (45), 1877 (20), and 1878 (20). Even with the reduced mintages it is by no means certain that all were sold. For example, of the 20 pieces reported for 1878 Walter Breen notes that "probably fewer than nine survive," indicating that perhaps not all 20 were originally sold. Today any Proof half eagle of the early period is considered to be an extreme rarity. Low business strike mintages for certain dates have placed an intense pressure on Proofs, with 1875 being the most outstanding example. In that year just 200 business strikes plus 20 Proofs were produced.

After 1878 the production figures for Proofs increased: 1879 (30 Proofs struck), 1880 (36), 1881 (42), 1882 (48), 1883 (61), 1884 (48), 1885 (66), 1886 (72), 1887 (87), 1888 (95), 1889 (45), 1890 (88), 1891 (53), 1892 (92), 1893 (77), 1894 (75), 1895 (81), 1896 (103), 1897 (83), 1898 (75), 1899 (99), 1900 (230), 1901 (140), 1902 (162), 1903 (154), 1904 (136), 1905 (108), 1906 (85), and the last year of the Coronet type, 1907 (92). 1887 has a fame all its own; no business strikes were made this year, with the result that anyone desiring any example of the Philadelphia Mint half eagle must acquire either a Proof or an impaired Proof.

The rarity of *Choice* Proof coins is exacerbated by Mint handling procedures of the time, as vividly stated in a sworn deposition made in 1886 by Harlan P. Smith, one of the most prominent numismatists of the era:

> Harlan P. Smith, being duly sworn, says that he resides in the City of New York and that he called on the United States Mint in Philadelphia in June 1886 and went to the Coin and Medal Clerk and requested to be furnished with a Proof gold dollar of the current year. The clerk opened the small writing desk and took out a round paper box which contained numerous gold Proofs. He scraped them over with his fingers and rubbed them together, upon which proceeding deponent looked with utter astonishment as it defaced the coins with pin marks and scratches. Deponent has always believed and still believes that Proof coins are struck by the government for the benefit of coin collectors who are required to pay a premium for such perfect coins, and that from the improper manner in which they were handled by this clerk they were blemished and therefore collectors ought not to be compelled to pay a premium for such ignorance and incompetence displayed by the clerk in charge of that department.
>
> Deponent further states that the clerk informed him that there were no Proof gold dollars to be had, and that he then requested to be furnished with two silver Proof sets and 20 minor Proof sets, and when said request was made the clerk made some remark which left the impression in deponent's mind that the clerk was conferring a great favor upon him and acted as though he owned the entire Mint and the contents thereof. Deponent therefore claims that the government should not employ clerks unless they are fully competent for such position and said clerk, having been shown to be clearly incompetent, should be removed.
>
> Sixth day of December 1886
>
> (Signed) H. P. Smith

Even in the later years mintage figures tend to be misleading. Two-hundred and thirty Proofs were reported minted for 1900, and yet only 30 auction records, including duplicate appearances of certain coins, can be traced by David Akers.

A comparison of Proof mintage figures of half eagles with those of lesser denominations will show that half eagles were produced in smaller quantities. To buy a Proof gold dollar or quarter eagle was not much of a financial hardship for many collectors but larger denominations such as the half eagle, eagle, and double eagle represented major expenditures in terms of face value

one. Only the wealthy could afford to collect ıem by date sequence.

Proofs were made at the Philadelphia Mint of ıe Indian half eagle type from 1908 through 915. As noted in the quarter eagle chapter, the nish of the pieces is of the so-called Matte or andblast type, with several variations. Mintage gures are as follows: 1908 (167 Proofs struck), 909 (78), 1910 (250), 1911 (139), 1912 (144), 913 (99), 1914 (125), and 1915 (75). The mintage gures in certain instances are very misleading. or example, concerning 1910, of which 250 roofs were supposedly struck, David Akers otes that "it is likely that either the relatively igh Proof mintage figure is an error or many of ıe Proofs were subsequently melted, because the Proofs of 1910 are as rare as those of other dates of this type with much lower mintages." Compounding the situation is the great disfavor with which contemporary collectors viewed Proofs with non-brilliant finish. Many pieces of this style were simply spent by collectors after they were received. So unpopular were Matte Proofs that only 75 were produced in 1915 (of which probably no more than a dozen or so exist today).

In modern times Matte Proof gold coins have been avidly sought by numismatists who view them as an interesting departure from the earlier brilliant style. Certainly, among twentieth-century American coinage Matte Proof gold coins are the "rarest of the rare."

Eagles

10

The eagle or $10 gold piece, first minted in 1795, was America's largest denomination until the advent of the double eagle in circulation in 1850. During the early years coinage was effected from 1795 through 1804, after which the denomination was suspended until 1838. From the latter time through 1933, eagles were produced continuously with the exception of some interruptions after 1916. The 1820s and early 1830s, spans encompassing great rarities in the quarter eagle and half eagle coinage, saw no comparable coinage of eagles. The result is that while several dates are considered elusive by numismatists today, 1858, 1875, 1920-S, and 1933 among them, there are no "impossible rarities" of the magnitude of the 1822 or 1825/4 $5 pieces.

During the 1780s Congress entertained several proposals for coinage encouraged by Robert Morris, Thomas Jefferson, and others. On August 8, 1786, Congress established a coinage system, the largest denomination of which was the gold eagle or $10 piece containing 246.268 grains of pure gold. It was specified that the $10 and its companion, the $5, be "stamped with the impression of the American eagle." The proposal languished, and no coinage resulted.

The Act of April 2, 1792, which established the Mint, provided for various denominations, including a gold eagle weighing 270 grains, of which 247½ grains were to be pure gold. While copper coinage intended for circulation first emanated from the Philadelphia Mint in 1793, the onerous requirements that the chief coiner and assayer each post personal surety bonds in the amount of $10,000 prevented coinage of precious metals. Accordingly, it was not until 1794, when the bond had been substantially reduced, that silver coinage took place, and not until 1795 that the first gold coins appeared.

The initial delivery of eagles, amounting to 400 coins, took place on September 17, 1795. The designs, by Robert Scot, were similar to those used on the half eagle. The obverse features what collectors designate today as the capped bust to right style, and the reverse depicts an eagle perched on a palm branch holding a wreath aloft in its beak, a motif taken from classical origins (refer to the 1795 half eagle for additional details). Edgar H. Adams, a student of the denomination, noted that President George Washington desired to have gold coins struck before his term of office expired, and this wish was granted in October 1795 when Director of the Mint Henry DeSaussure delivered 100 eagles to him.

Some specimens of the 1795 eagle exist today with prooflike surfaces, indicating that they may have been struck as presentation pieces, possibly as part of the 100 delivered to Washington.

Eagle coinage of this design occurred in 1795, 1796, and the early part of 1797. The 1797 $10 with small eagle reverse is believed to have been minted to the extent of 3,615 pieces (as opposed to 5,583 for 1795 and 4,416 for 1796) and is today the most elusive of the three dates of the design.

The majority of the 1797 eagle coinage, a coinage believed to have amounted to 10,940 pieces, was of the heraldic eagle reverse style. This design was continued through the end of the early series in 1804. 1798 eagles are all overdates, 1798/7, and were made with two major obverse variations: nine stars left and four right, and seven

stars left and six right. The latter is very elusive.

In 1792 Congress established the relative value of silver to gold at 15 to 1. This relationship proved inaccurate, as in the marketplace the value more closely approximated 16 to 1, with the result that early gold coins could be melted down and sold for more than face value in terms of silver. After 1803, when France officially adopted a ratio of 15½ to 1, vast quantities of gold coins were exported or went to the melting pot. To stem this wasted coinage effort, Mint Director Elias Boudinot suspended coinage of eagles in 1804, but not before 3,757 were struck. Thus ended the early series.

During the 1834-1835 years the Philadelphia Mint produced several specimen Proof sets to illustrate American coinage. Each set contained one of each denomination currently being made: the half cent, cent, half dime, dime, quarter dollar, half dollar, quarter eagle, and half eagle. No examples of the largest regular silver coin, the silver dollar, had been coined for many years, as was also true of the eagle. Desirous of including these large denominations in the presentation Proof sets, but realizing that no examples were currently being made for circulation, officials at the Mint checked production records to determine the most recent date of regular coinage. They learned that 19,570 silver dollars were coined in 1804 and several thousand eagles were produced at the same time. What they did not know, however, was that the 1804 coinage of silver dollars referred to specimens from earlier-dated dies, and that no 1804-dated dollars were originally made.

New dies were made up, and 1804-dated dollars and eagles were struck for inclusion in 1834 Proof sets. Thus was created for the first time a great rarity, the 1804 dollar. Also created was a variety of the 1804 eagle entirely unlike any specimen actually coined in the year dated. The devices were the same on both types of eagles, but the 1834-produced issue was made with a beaded border entirely unlike the border of denticles used earlier, there were differences in the edge treatment, and the last digit of the date had a plain 4 rather than a crosslet 4. Just four specimens of the 1804-dated eagle made in 1834-1835, each in Proof condition, are known to exist today:

1. The Eliasberg Collection specimen, earlier from the Clapp Collection, and, before that, from the holdings of William H. Woodin.

2. The specimen which appeared in the Farish Baldenhofer Collection sold by Stack's. Earlier owned by Col. E. H. R. Green.

3. The specimen included in a Proof set produced circa 1834 for the King of Siam, later acquired by David Spink, of London, and extensively publicized during the 1960s via a series of articles in *The Numismatist.* Presently owned by a Pennsylvania numismatist.

4. The example formerly in the collection of Virgil Brand.

In addition, a number of silver strikings from the same dies are known. It is possible that these silver issues were "restrikes of a restrike" and were made circa 1858-1860.

In 1838 the regular coinage of eagles for circulation was resumed. The Act of June 28, 1834 had reduced the weight of gold coins, with the result that eagles of 1838 and subsequent years were not susceptible to melting for profit. The new design, by Christian Gobrecht, was reduced from the old standard of 33 millimeters to the new 27 millimeter format, and weighed just 258 grains (of .900 pure gold).

If patterns were made of the 1838 design, no examples survive today. The obverse, known as the *Coronet* type by collectors, features the head of Miss Liberty facing left, her hair compactly tied with a beaded cord at the back, and wearing a coronet inscribed LIBERTY. Thirteen stars circle the head. The reverse features a perched eagle with inscriptions surrounding. A related design was used on the half eagle beginning in 1839 and, in modified form, on the quarter eagle beginning in 1840. After coinage of eagles in 1838 and part of 1839, the obverse portrait was redesigned slightly and its angle on the coin adjusted. Thus 1838 eagles and certain issues dated 1839 are of a slightly different type than later pieces.

In 1841 the first branch mint eagle was produced, the New Orleans 1841-O issue. From that point through 1860, after which time the Civil War caused coinage to be suspended, the New Orleans Mint struck coins of this denomination each year. Interestingly, the Charlotte and Dahlonega mints produced gold dollars, quarter eagles and half eagles, but struck no $10 coins.

During the early years of the Coronet type

several interesting varieties were produced, including the 1842 small date and large date, the 1846/5-O overdate (which is a discovery of recent decades and which is not significantly rarer than the regular 1846-O), the recently discovered 1853/2 overdate, and large and small date variations of 1854-O.

In 1854 the San Francisco Mint began operation. In contrast to limited mintages of 1854-S quarter eagles and half eagles, a generous production of 123,826 1854-S eagles ensued. From that point forward San Francisco production of eagles was continuous for two decades, and nearly continuous after that time.

The most elusive early issue in the Coronet series is the 1858, a coin of which 2,521 were minted. For many years virtually any appearance of an 1858 eagle was attended with all sorts of fanfare. David Akers states the facts succinctly in his *United States Gold Coins, An Analysis of Auction Records, Volume V:*

> Because of the hype and hoopla given to this date when it was catalogued by B. Max Mehl as well as others many years ago, the 1858 is one of the few Liberty head eagles that has attained a level of fame commensurate with its rarity. In fact, its reputation actually exceeds its true rarity which has often been greatly exaggerated with erroneous statements claiming that only four, six, or eight are known. Many more are known than that (25 to 30 business strikes would be a good guess), but the date must still be considered very rare in any grade and extremely rare from the standpoint of "condition rarity."

The numismatic world loves a rarity, and if a series lacks a piece which is truly exceedingly rare, then whichever coin is scarcest — although it may not be a great rarity in absolute terms — will ascend to a certain position of fame. A related example involves a much more common coin, the 1911-D quarter eagle, a coin of which just 55,680 were struck. Although in absolute terms the 1911-D is not extremely rare, by comparison to others of its design type (the next lowest mintage is 240,117 for the 1914) it is elusive. So it is also with the 1858 eagle. Virtually any quarter eagle or half eagle of the 1820s or early 1830s is rarer than the 1858, but as these quarter eagles are part of a series studded with great rarities, the typical piece within that range has not been given the elevated status of the 1858 eagle. In no way should the 1858 eagle be disparaged. Perhaps the situation is not that too much publicity is given to the 1858 eagle but, rather, that not enough publicity is given to others of comparable rarity. In fact, David Akers alludes to this with his statement that "the 1858 is one of the few Liberty head eagles that has attained a level of fame commensurate with its rarity."

In terms of high grades, virtually any early eagle is exceedingly rare. The reason? The $10 gold piece was a "workhorse" denomination. Few if any were saved by collectors at the time, with the result that Uncirculated specimens of the early years are few and far between. One has but to read David Akers' comments to vividly verify this. Samples: "The typically available 1838 is only VF-EF, and strictly Uncirculated specimens are extremely rare," "Most known specimens [of the first type of 1839] are in the VF-EF range, and strictly graded AUs are very rare. A few Uncirculated examples are known, but they must be considered extremely rare," "When available the 1840 is invariably only Very Fine or Extremely Fine at best. Strictly graded AU examples are very rare, and I have not personally seen an Uncirculated specimen," "Accurately graded EF or AU specimens [of the 1841-O] are very rare, and I have only seen one at the AU level. To the best of my knowledge, no fully mint state example is known to exist," and "The overwhelming majority of known examples [of 1843] are only Very Fine. At the AU level, this date is extremely rare, and I have only seen one strictly Uncirculated example; an Uncirculated coin has never appeared for sale at auction, at least not in the 369 catalogues included in this survey."

It is often the situation that worn pieces are just slightly scarce or, for that matter, are common, but that Uncirculated pieces are either extremely rare or, in some cases, unknown. As an example the 1849-O, a coin of which 23,900 were minted, is plentiful in lower grades such as Fine, Very Fine, and Extremely Fine, but apparently not a single strictly Uncirculated specimen exists.

Following the suspension of specie payments early in the Civil War, production of eagles at the Philadelphia Mint, like the production of most other gold denominations, dropped sharply. Gold coins did not actively circulate, and those minted were either stored (to be released in the 1870s when specie payments were resumed) or used in international commerce. San Francisco Mint coinage was less affected, but still mintages of eagles

were relatively low. During the middle of the Civil War conflict, when the outcome was uncertain, it took about $25 in greenbacks to buy a gold eagle.

A curious variety from this era is the 1865-S over inverted 186. The engraver, perhaps daydreaming, punched the 3-digit 186 logotype upside down in the die! After three digits were impressed, the error was corrected, and the date was punched in the proper position. This type of glaring error also occurred elsewhere during the mid-nineteenth century. This was first publicized in 1960 by John J. Ford, Jr. who authored the Cicero Collection sale for the New Netherlands Coin Co. When first discovered, around 1960, the 1865-S over inverted 186 was considered to be an extreme rarity. Since that time additional specimens have come to light. Today collectors consider the variety to be scarce.

In 1866 the motto IN GOD WE TRUST was added to the reverse of the eagle. All 1866 Philadelphia issues display this sentiment. San Francisco eagles were made both ways, with and without motto. In 1861 it was first suggested that an inscription referring to the Deity be placed on our national coinage. During the next several years various mottos were considered, including GOD AND OUR COUNTRY, GOD OUR TRUST, and the successful IN GOD WE TRUST, the latter first appearing in circulation on the 1864 two-cent piece. In 1866 a change was made only on the larger gold denominations, the half eagle, eagle, and double eagle.

In 1870 eagles were struck for the first time at the Carson City (Nevada) Mint. During that year 5,908 were produced. Carson City production was continuous through 1884, and again from 1890 through 1893. Without exception, mintages were low. Today Carson City eagles are considered to be scarce, with 1879-CC (1,762 struck) being rare. An exception to the rule is provided by 1891-CC, a coin of which 103,732 were made.

Eagles of the Coronet type with motto on the reverse were minted through 1907. Rarities of the 1866-1907 era include 1873 (800 business strikes plus 25 Proofs struck), 1875 (100 business strikes and 20 Proofs), 1876 (687 business strikes, 45 Proofs), 1877 (797 business strikes, 20 Proofs), the previously-mentioned 1879-CC, 1879-O (1,500), and 1883-O (800).

Uncirculated examples of many issues in the 1860s and 1870s are elusive, but the demand for top grade specimens is alleviated to a small extent for the Philadelphia Mint pieces, at least, by Proofs. The elusive character of Uncirculated pieces is again vividly illustrated by David Akers' survey of nearly 400 auction sales. He located the following Uncirculated pieces of the dates indicated: 1866 (none), 1866-S (none), 1867 (1), 1867-S (none), 1868 (none), 1868-S (none), 1869 (2), 1869-S (2), 1870 (none), 1870-CC (none), 1870-S (none), 1871 (none), 1871-CC (none), 1871-S (none), and so on. Obviously, *any* Uncirculated piece within this range is an extreme rarity. After about 1880 the situation is ameliorated somewhat by effects of the practice of storing newly-minted gold coins in bank vaults in America and overseas. As a result vast quantities of coins were minted, bagged, and then stored for decades. This trend, at least for certain issues, is reflected by David Akers' studies of Uncirculated issues from 1880 onward: 1880 (24 Uncirculated pieces traced, including duplicates), 1880-CC (4), 1880-O (none), 1880-S (21), 1881 (61), 1881-CC (8), 1881-O (1), 1881-S (19), 1882 (87), and so on. As a general observation, Uncirculated eagles prior to 1880 are exceedingly rare. After that time, eagles with higher mintages often are represented today by numerous Uncirculated coins, most of which show extensive bagmarking.

The international hoarding of gold coins is responsible for many if not most of the larger denomination issues still in existence today. During the late nineteenth and early twentieth centuries there was little numismatic interest in half eagles, eagles, and double eagles. Their high face value precluded the average collector from assembling a set, with the result that interest was confined mainly to the wealthy. It is reasonable to assume, for example, that in 1880, when 36 Proof eagles were made, that any collector of eagles by date variety would desire a Proof. Surviving records kept by various collectors indicate that most buyers of Proofs during the time were not assembling date sets of the denominations involved but, rather, were simply acquiring current Proofs of the year. Virtually no attention was paid to mintmark varieties, and it is doubtful if even a single numismatist in 1880 desired to own one each of the Philadelphia, Carson City, and San Francisco eagles of the year. Interest in mintmark issues did not become widespread until the 1890s, when Augustus Heaton widely promoted

them. Even at that time, interest was mainly confined to lower denominations such as dimes, quarters, and half dollars. So, the survival of Uncirculated eagles of the era cannot be traced to the efforts of numismatists.

International transactions provided a great need for gold coins. Few commercial interests in England, Switzerland, and elsewhere desired to hold quantities of United States paper money. Many remembered the Civil War and unsatisfactory experiences with fluctuating values of Confederate and Union currency, with the former subsequently proving to be worthless. "Hard money" in the form of gold was far more preferable, and filling this demand were $5, $10, and $20 issues. By the millions these coins went to commercial and government banks abroad, where they remained for decades. During 1933-1934, when the United States discontinued the use of gold coins and demanded that citizens turn them in, the foreign banks held on to gold more tightly than ever. During this period of international monetary turmoil few wanted United States paper money.

This policy had a beneficial effect for numismatists. After World War II, gold coins began to be imported into the United States, some officially (by means of special licenses which had to be procured from the Treasury Department) and others by smuggling. It was soon realized that Switzerland, Venezuela, Argentina, France, and certain other countries had vast storehouses of American gold coins. The late James Kelly, the well-known Dayton (Ohio) dealer, tapped vaults in Argentina and imported hundreds of scarce Carson City issues. Other dealers, the present writer included, acquired large numbers of coins from Switzerland. During the 1950s it was possible to obtain scarce issues for just a slight premium. But, by the mid 1960s most Swiss banks were equipped with American reference books or, in some instances, actually had rare coin departments, and prices rose. Still, it is probably accurate to say that the majority of American gold coin rarities of the larger denominations and dated from the mid-nineteenth century onward in the hands of American collectors today were imported from overseas sometime during the past several decades. Perhaps significant of the quantities of coins which once existed is an experience the writer had in 1961 when visiting a large bank in Zurich, Switzerland. An inquiry was made as to how many common-date double eagles could be supplied at the wholesale rate quoted. "I can confirm up to 100,000," the banker noted, "but for a larger quantity I will have to consult with others in the bank."

By the 1970s such hoards had been picked over so thoroughly that in some instances American tourists visiting Switzerland, knowing of the discoveries made there years earlier, actually had to pay more in Switzerland for scarce pieces than the current prices in the United States! In a related vein, the writer once sold a quantity of Indian cents to a prominent London, England dealer who had a lively trade in them with American tourists who shopped overseas for bargains!

After the Civil War no eagles were struck at New Orleans until 1879, after which coinage occurred through 1883, again in 1888, from 1892 through 1895, 1899, and, finally, from 1903 through 1906. The Denver Mint opened for business in 1906 and produced Liberty head eagles in that year and the year subsequent. In 1907, following a continuous coinage of nearly 70 years, the Coronet or Liberty head eagle was discontinued.

In its place appeared a new design, the Indian head style designed by noted sculptor Augustus Saint-Gaudens with the encouragement of President Theodore Roosevelt.

Unlike any president before or since, Roosevelt used his office to elevate the nation's coinage to what he considered to be new lofty highs of artistic merit. In 1908 Roosevelt's Boston friend, Dr. William Sturgis Bigelow, enlisted the talents of Bela Lyon Pratt to produce the radically different incuse Indian quarter eagle and half eagle. But, it was Saint-Gaudens' activity with the larger $10 and $20 denominations that was Roosevelt's finest accomplishment.

Born to a wealthy New York family in 1858, Theodore Roosevelt overcame a sickly youth by rigorous exercise, including horseback riding, shooting, and boxing. Graduating from Harvard with a law degree in 1880, he spurned his chosen profession to become an author. *The Naval War of 1812*, published in 1882, marked the first of many books he would write during his colorful career. *Hunting Trips of a Ranchman*, *Thomas Hart Benton*, *Gouverneur Morris*, *Ranch Life and the Hunting-Trail*, *Essays on Practical Politics*, the initial two

1799. (Small stars.) Extremely fine, Stickney.....$ 19.00
1800. Very fine, Stickney, 1907..... 15.50
1801. Uncirculated, Stickney, 1907..... 20.00
1801. Fine, Elder, 1908..... 13.25
1803. (Small stars.) Extremely fine, Stickney, 1907..... 25.00
1803. (Large stars.) Fine, Elder, 1908..... 20.00
1804. Fine, Mehl, 1909..... 80.00
1804. Very fine, Elder, 1908..... 25.50
1804. Very fine, Jewett, 1909..... 41.00
1838. Extremely fine, Wilson..... 32.00
1838. Very fine, Wilcox, 1901..... 22.00

This design was the work of Engraver William Kneass, and, with the exception of the addition of the motto, "In God We Trust," in 1866, the same type was continued until 1907, when it was succeeded by the new design of Augustus St. Gaudens. Very few of the ten-dollar pieces issued after 1804 bear a premium. None of these coins was issued from 1804 until 1838. Nearly all the eagles issued from 1838 up to 1907 are omitted, bearing as a rule such small premiums if any, that mention of them is scarcely worth while.

1858. Brilliant proof, Jewett, 1909..... 102.50
1907. Wire edge variety. Uncirculated, Elder, 1907..... 40.00
1907. Wire edge variety, Mehl, 1909..... 35.00

1907. With flat border, and with periods at either side of the motto "E Pluribus Unum," Chapman, 1909..... 35.00
1907. With wider border, periods omitted. Type issued for general circulation, Chapman, 1908..... 10.50

Prices of $10 issues from Edgar H. Adams' "Official Premium List" published in 1909. Few people collected Liberty head issues by variety, with the results that Carson City pieces, 1879-O, 1883-O, and other coins valued highly by collectors today were overlooked at that time.

volumes of *The Winning of the West*, not to overlook numerous articles and essays, were produced during the ensuing decade.

Elected Republican assemblyman for New York's 21st District, a term which he served 1882-1884, he sought to reform every area of misconduct which came to his attention. Popular with his constituents, Roosevelt, as might be expected, was an annoyance to others in his party. After a brief try at ranching in Dakota Territory, Roosevelt returned to enter the New York City mayoralty contest in 1888, losing against well-entrenched opponents. A supporter of the Republican presidential ticket in 1888, he was given the position of a civil service commissioner in May 1889. As those around him tried to ignore the Pendleton Act, which reformed civil service in 1883, Roosevelt stirred up publicity as he pointed out numerous wrongdoings.

In 1895 he left Washington to become president of the Board of Police Commissioners in New York City. With a ready eye for newspaper headlines, Roosevelt unearthed many illegal, seamy, and corrupt practices which kept newspaper editors happy and which catapulted Roosevelt to national fame. In 1897 President McKinley made him assistant secretary of the Navy, where he served until May 1898, when he resigned to form a cavalry regiment, the Rough Riders, which saw heroic service in Cuba during the Spanish-American War. Returning to America, his authentic heroism was widely acclaimed. By complex political maneuvering he was nominated as McKinley's vice-president on the 1900 Republican ticket.

On September 6, 1901, while attending the Pan-American Exposition in Buffalo, New York, McKinley was shot by an anarchist. Upon his death eight days later, Theodore Roosevelt became president. A competent administrator, Roosevelt brought to the office an intense dislike of complicated procedures and red tape. Seeking a broad contact with the electorate, Roosevelt was truly a president of the people. Representatives of the arts, sciences, and letters had a contact with the White House hitherto unknown. The Washington social scene sparkled, and lavish parties provided endless newspaper copy. Of his beautiful daughter Alice, who was chaperoned by many men and who did such daring things as smoking in public, Roosevelt observed that he could do a good job of keeping an eye on Alice or managing the presidency, but it was difficult for him to do both! By 1904 his popularity was widespread and reelection came by a landslide. An innocuous furry toy, nicknamed the "teddy bear" after Roosevelt's big-game hunting exploits, became a national fad, much to the later consternation of the backers of William Howard Taft, a Roosevelt rival, who complained that the teddy bear represented unfair publicity and who proposed for their own candidate a mascot named "Billy Possum."

Today Roosevelt's presidency, which lasted through 1908, is remembered for its trustbusting activities, for the 1906 Pure Food and Drug Act (which put an effective end to patent medicines and their fraudulent claims as well as unclean and unsafe food), his daring display of American force when he sent the "Great White Fleet" around the world (from December 1907 through February 1909) with his policy voiced as "Speak softly and carry a big stick," and his dynamic and colorful involvement in every aspect of American life which interested him.

In May 1901 Theodore Roosevelt, then vice-president, visited the Pan-American Exposition, returning from Buffalo to his Oyster Bay, New York home on the train. During the ride he met for the first time sculptor Augustus Saint-Gaudens and had lunch with him and another acquaintance. The incident was described as "great fun." On May 31st Roosevelt, still impressed with the meeting, wrote to Saint-Gaudens:

> It was a great pleasure to catch a glimpse of you the other day in the cars. We earnestly hope that Mrs. Saint-Gaudens and yourself can come out here [to Roosevelt's Oyster Bay home] for a night when next you are in New York. Probably you will never realize what a real comfort and source of pride you have been to me. I am very proud of America and very jealous of American achievement. It has been to me a source of real regret and concern to see how our writers have passed away and left no one to take their place; and as no amount of mere material achievement seems to me worth while, if taken purely by itself — I mean mere increase in wealth and industrial facilities — it is always a relief to be able to think that there is one American in the prime of his powers who is leaving us the Lincoln, the Farragut, the Sherman, the monument to Shaw and so much else that represents a real addition to the national sum of permanent achievement . . .

Born in Dublin, Ireland, March 1, 1848, Augustus Saint-Gaudens sailed to America with his family a few months later, arriving in Boston

Soon the family relocated in New York, where his father became a shoemaker. As a child Augustus spent much time in the shop, often sketching shoe workers at their daily tasks. Finishing his limited schooling at the age of 13, he was asked what he would like to do. "I don't care, but I should like it if I could do something which would help me to be an artist," was his reply. His father apprenticed him to a stonecutter, from which position he went to employment under a shell-cameo craftsman. With great ambition he cut cameos during the day and studied drawing at Cooper Union at night. At the National Academy of Design he drew studies using nude subjects. At the age of 19 he had the opportunity to go to the 1867 Paris Exposition. In France he studied with several artists, after which he enrolled in the Ecole des Beaux-Arts. From there he went to Rome, discovering a city which was to fascinate him for the remainder of his life. Returning to New York, he received several commissions. Soon he developed a reputation for his excellent work with American historical and related figures, as typified by his sculptures of *Hiawatha* (for Saratoga, New York), *Silence* (for the Masonic Temple, New York City), *Admiral Farragut* (Madison Square, New York City), *Sherman* (New York City), and others. Roosevelt referred to certain of these accomplishments in his May 1901 letter.

Diana, sculpted in 1892 for the original Madison Square Garden, *Amor Caritas*, figures of Lincoln, *The Puritan*, and others brought him fame. His work, described by one as a mixture of simplicity, beauty, and heroic majesty, left a measure of interpretation to the viewer, conveying an atmosphere of the "ever mysterious beyond."

In 1885 he determined that Cornish, New Hampshire, across the river from Windsor, Vermont, offered a combination of rustic beauty and solitude. He formed an estate "Aspet," in Cornish, adding studios to the old house he purchased. Maxfield Parrish, the artist, Winston Churchill, the novelist, and others were neighbors. Each summer the talented residents of Cornish, several of whom had acquired world fame, conducted outdoor plays and festivals. It was in the rural setting of Cornish that he found his greatest inspiration, often thinking of Rome, the foreign city closest to his heart, and Paris.

From time to time Roosevelt kept in touch with Saint-Gaudens, consulting him on matters involving sculpture and art. For example, on July 28, 1903 President Roosevelt wrote to the sculptor:

> I have always taken an interest in Kemeys, the animal sculptor. Some of his work has been very good. Apparently he is not to be allowed to exhibit at the St. Louis Fair. Could you let me know a little about this?

It is not known when Theodore Roosevelt first formulated the idea of having Saint-Gaudens redesign our coinage, but by December 27, 1904, the concept was sufficiently entrenched in the president's mind that he wrote to Secretary of the Treasury Leslie Mortier Shaw:

> I think our coinage is artistically of atrocious hideousness. Would it be possible, without asking permission of Congress, to employ a man like Saint-Gaudens to give us a coinage that would have some beauty?

On January 16, 1905 President Roosevelt further pursued the situation with Shaw:

> In accordance with our conversation and the agreement we came to in connection with the coinage, I would like you to submit this letter to the Director of the Mint. I suppose it comes under his immediate supervision.
>
> In the first place, about the coinage. How soon will it be possible to have Saint-Gaudens employed for at least one set of coins? Of course he is to be given an absolutely free hand. This is not a reflection upon the Director of the Mint or any of his subordinates. It is out of the question that great artists should be put in the position of Director of the Mint or of his subordinates, if only for the reason that they would probably be wholly incompetent to do the work; but it is of the utmost importance that the artist should be left absolutely unhampered in working out the design and execution of the coin or medal. I do not wish there to be the slightest interference with Saint-Gaudens in connection with the coinage from its artistic side. Please have the matter taken up at the earliest possible moment, and advise me about it. In the next place, please have the Director of the Mint write at once to Saint-Gaudens, and to F. D. Millet [an artist of renown; in 1912 he met his death aboard the ill-fated *Titanic*], whose address is 6 West 23rd Street, New York City, as to the medal to be struck for the inauguration. General Winfield Scott, in July, 1846, wrote to the Secretary of War in regard to the medal for the Mexican War veterans:
>
> "As medals are among the surest monuments of history as well as muniments of individual distinction, there should be given to them, besides intrinsic value and durability of material, the utmost grace of design with the highest finish in mechanical execution . . . What the state of this art may be now in the United

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Roosevelt and Our Coin Designs

Letters between Theodore Roosevelt and Augustus Saint-Gaudens

Collected by Homer Saint-Gaudens
Photographs by DeW. C. Ward

The versatility of Theodore Roosevelt is once more manifested in the following correspondence between the late ex-President and Augustus Saint-Gaudens, the famous sculptor and the designer of a series of American coins. Americans will be interested to learn that their President was personally conducting the campaign for a more artistic series of coinage designs.

IN the winter of 1905 Theodore Roosevelt met Augustus Saint-Gaudens at a dinner in Washington, during which the conversation drifted to the subject of the old high-relief Greek coins. Saint-Gaudens had come to Washington primarily to serve, under the auspices of the park commission, with the architects Charles F. McKim and D. H. Burnham and the landscape-architect Frederick Law Olmsted on a committee gathered by the President to give criticism and advice toward maintaining the beauty of the National Capitol according to the plans of the original architect, L'Enfant. In the course of their service, whenever President and sculptor met, the latter's opinion was sought by Mr. Roosevelt concerning the obvious subject on which Saint-Gaudens could give counsel of a high order—sculpture.

One of the most direct ways in which art may bear upon public welfare is through the coinage. Saint-Gaudens spoke with deep admiration of the Greek coins. To him they were almost the only coins worthy of consideration. Why could not the United States have coins like the Greeks, the President wished to know. If Saint-Gaudens would model them, he, the President, would cause them to be minted, since, as he expressed it, with his customary vehemence, "This is my pet crime."

The notion of producing worthy coins might never have been carried out; the discussion and desire for them could have lapsed with the end of that dinner had either the President or the artist been a less sincere character. Each proved willing, however, in a peculiar way, to contribute something to the nation, the sculptor his genius, the statesman the energy of his position. It is an extraordinary thing that, in the midst of all his other duties and perplexities, a

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First page of a lengthy article in the April 1920 issue of "The Century," by Homer Saint Gaudens. The role of the author's father Augustus in the 1907 coinage is told by means of correspondence. Shown at the top of the page is the 1904 inauguration medal designed by Saint-Gaudens for Roosevelt. Roosevelt, pleased with the medallic effort, commissioned Saint Gaudens to redesign the national coinage.

States, I know not. But I beg leave again to suggest that the honor of the country requires that medals voted by Congress should always exhibit the arts involved, in their highest state of perfection, wherever found, for letters, science, and the fine arts constitute but one republic, embracing the world. So thought our early government and Mr. Jefferson — a distinguished member of that general republic."

We find that all artists are one in feeling that our recent medals are markedly inferior to the medals struck for foreign nations, notably the French. I desire that this medal represent fine artistic work, and that either Saint-Gaudens or someone chosen by Millet and Saint-Gaudens be given an absolutely free hand in making it. Please have an immediate report made to me on this matter also.

The preceding letter expresses Roosevelt's extreme displeasure with an inaugural medal based upon designs provided by Charles E. Barber and George T. Morgan. Joseph K. Davison's Sons, Philadelphia medallists, quoted a price of $1000 for 3,000 bronze medals to be ready by inauguration day, March 4, 1905. The proposed inaugural medal was hardly original, the obverse and reverse having been taken from the Barber-Morgan effort in 1901 when the Roosevelt presidential medal was produced to add to the regular Mint series. In his book *The President's Medal 1787-1977* Neil MacNeil noted:

The Davison copyists in 1905 basically repeated the 1901 Mint medal, changing the inauguration date to March 4, 1905, and reducing its size. To complete the plagiarism, they eliminated the names of Barber and Morgan and substituted the Davison name on the reverse. By the testimony of this Davison medal, President Roosevelt looked in 1905 just the same way he did in 1901.

This medal did not please President Roosevelt. A man with interests and enthusiasms of astonishing variety, he had pronounced ideas on artistic matters, and he pursued them with the intensity that characterized so much of his life. Early in his presidency, he had drawn to his side American artists of outstanding abilities, and they became an informal cabinet of art advisers. With one of these, Frank Millet, Roosevelt discussed the Davison medal. Millet, a painter, spoke bluntly: the president's inaugural medal should come from the hands of a great artist, not a commercial journeyman. Millet suggested Augustus Saint-Gaudens, the greatest of living American sculptors . . .

On January 18, 1905 Saint-Gaudens agreed to design Roosevelt's inaugural medal. Sketches for the obverse and reverse were made, and by January 20th Adolph Weinman, a thirty-four year old former student of Saint-Gaudens, had agreed for $250 to translate the sketches into medals. After many frustrations and much wrangling, medals were produced in gold and in two sizes of bronze. Roosevelt's appreciation was expressed in a letter to Saint-Gaudens:

My dear fellow, I am very grateful to you, and I am very proud to have been able to associate you in some way with my administration. I like the medals immensely; but that goes without saying; for the work is eminently characteristic of you.

To the typed letter he appended additional comments: "Thank Heaven we have at last some artistic work of permanent worth done for the government," and "I don't want to slop over; but I feel just as if we had suddenly imported a little of Greece of the 5th or 4th centuries B.C. into America; and I am very proud and grateful that I happen to be the beneficiary."

Considerable correspondence ensued between Roosevelt and Saint-Gaudens. On November 6, 1905 the President wrote:

How is that old gold coinage design getting along? I want to make a suggestion. It seems to me worth while to try for a really good coinage; though I suppose there will be a revolt about it! I was looking at some gold coins of Alexander the Great today, and I was struck by their high relief. Would it not be well to have our coins in high relief, and also to have the rims raised? The point of having the rims raised would be, of course, to protect the figure on the coin; and if we have the figures in high relief, like the figures on the old Greek coins, they will surely last longer. What do you think of this?

In the April 1920 issue of *The Century* magazine, from which much of the presently reproduced correspondence is taken, the sculptor's son, Homer Saint-Gaudens, noted that his father had an "excessively disagreeable and stultifying encounter" with the Mint as a result of his reluctantly accepting a commission to design the 1892 World's Columbian Exposition medal. Saint-Gaudens' first design for the reverse, featuring a nude boy holding a shield, was rejected, as was a second draped version. The third effort substituted an eagle for the boy, but this too was rejected, accompanied by the announcement that a reverse design by Charles E. Barber of the Mint had been selected to be combined with Saint-Gaudens' obverse.

On November 11, 1905 the artist wrote to the President:

You have hit the nail on the head with regard to the coinage. Of course the great coins (and you might almost say the only coins) are the Greek ones you

speak of, just as the great medals are those of the fifteenth century by Pisanello and Sperandio. Nothing would please me more than to make the attempt in the direction of the heads of Alexander, but the authorities on modern monetary requirements would, I fear, "throw fits," to speak emphatically, if the thing was done now. It would be great if it could be accomplished and I do not see what the objection would be if the edges were high enough to prevent rubbing. Perhaps an inquiry from you would not receive the antagonistic reply from those who have the say in such matters that would certainly be made to me.

Up to the present I have done no work on the actual models for the coins, but have made sketches, and the matter is constantly in my mind. I have about determined on the composition of one side, which would contain an eagle very much like the one I placed on your medal with the modification that would be advantageous. On the other side I would place a (possibly winged) figure of liberty striding energetically forward as if on a mountain top holding aloft on one arm a shield bearing the Stars and Stripes with the word Liberty marked across the field, in the other hand, perhaps, a flaming torch. The drapery would be flowing in the breeze. My idea is to make it a *living* thing and typical of progress. Tell me frankly what you think of this and what your ideas may be. I remember you spoke of the head of an Indian. Of course that is always a superb thing to do, but would it be a sufficiently clear emblem of Liberty as required by law?

I send you an old book on coins which I am certain you will find of interest while waiting for a copy I have ordered from Europe.

The President replied on November 14, 1905:

I have your letter of the 11th instant and I return herewith the book on coins, which I think you should have until you get the other one. I have summoned all the Mint people, and I am going to see if I cannot persuade them that coins of the Grecian type but with the raised rim will meet the commercial needs of the day. Of course I want to avoid too heavy an outbreak of the mercantile classes, because after all it is they who do use the gold. If we can have an eagle like that on the Inauguration Medal, only raised, I should feel that we would be awfully fortunate. Don't you think that we might accomplish something by raising the figures more than at present but not so much as in the Greek coins? Possibly the Greek coins would be so thick that modern banking houses, where they have to pile up gold, would simply be unable to do so. How would it be to have a design struck off in a tentative fashion — that is, to have a model made? I think your Liberty idea is all right. Is it possible to make a Liberty with that Indian feather head-dress? Would people refuse to regard it as a Liberty? The figure of Liberty as you suggest would be beautiful. If we get down to bed-rock facts would the feather head-dress be any more out of keeping with the rest of Liberty than the canonical Phrygian cap which never is worn and never has been worn by any free people in the world?

Roosevelt's reference is to the famed *liberty cap*, a fixture in American coinage designs from the half cents and cents of 1793 through the Liberty seated issues ending in 1891. Obviously, the president did his homework and approached the entire subject of coinage with a refreshing enthusiasm, continually taking care, however, to let the artist's ideas develop. On November 22, 1905, Saint-Gaudens replied:

Thank you for your letter of the 14th and the return of the book on coins.

I can perfectly well use the Indian head-dress on the figure of Liberty. It should be very handsome. I have been at work for the last two days on the coin and feel quite enthusiastic about it.

I enclose a copy of a letter to Secretary Shaw which explains itself. If you are of my opinion and will help, I shall be greatly obliged.

I think something between the high relief of the Greek coins and the extreme low relief of the modern work is possible, and as you suggest, I will make a model with that in view.

The sculptor wrote to Shaw, November 22, 1905, to determine the statutory requirements for coin inscriptions:

I am now engaged on the models for the coinage. The law calls for viz., "On one side there shall be an impression emblematic of liberty with the inscription of the word 'liberty' and the year of the coinage." It occurs to me that the addition on this side of the word "Justice" or "Law," preferably the former, would add force as well as elevation to the meaning of the composition. At one time the words "In God We Trust" were placed on the coins. I am not aware that there was authorization for that, but I may be mistaken.

Will you kindly inform me whether what I suggest is possible.

On November 24, 1905 Roosevelt wrote to Saint-Gaudens:

This is first class. I have no doubt we can get permission to put the word "Justice," and I firmly believe that you can evolve something that will not only be beautiful from the artistic standpoint, but that, between the very high relief of the Greek and the very low relief of the modern coins, will be adapted both to the mechanical necessities of our Mint production and the needs of modern commerce, and yet will be worthy of a civilized people — which is not true of our present coins.

It is worth noting at this point that Barber's design for the dime, quarter, and half dollar, first circulated in 1892, and Morgan's design for the silver dollar, first circulated in 1878, evoked

almost universal disapproval from American artists. In 1895 a national competition saw numerous artistic and innovative designs submitted to the Treasury Department for consideration as replacements, but nothing was done. The Barber efforts in particular were called "mere tokens unworthy of a civilized nation" and "without artistic merit." Indeed, in 1916 when the Barber pieces were replaced with the "Mercury" dime, Liberty standing quarter, and Liberty walking half dollar, there was rejoicing among numismatists, and pages of joyful accolades filled *The Numismatist* and other publications.

The word "Justice" never appeared on Saint-Gaudens' coins. E PLURIBUS UNUM, viewed as an unnecessary inscription by the artist, was relegated to the edge on the $20 piece eventually produced. "In God We Trust," which had appeared on gold denominations since 1866, was discarded by two votes, that of Saint-Gaudens in favor of simplicity and that of Roosevelt who believed that the name of the Deity had no place on our national coinage (Congress disagreed and restored it in 1908). The sculptor suggested that a date in Roman numerals would be more in keeping with classic artistry than Arabic numerals, and Roosevelt agreed. This change, too, proved ephemeral, and after being used on the initial coinage of MCMVII (1907) $20 gold pieces, it was dropped in favor of a dating system which could be readily understood by the majority of the public.

The Mint was jealous of its prerogatives and resented the incursion of Saint-Gaudens, resisting him at every turn. Roosevelt intervened, met with Secretary of the Treasury Shaw, and reported on January 6, 1906 to Saint-Gaudens:

> I have seen Shaw about that coinage and told him that it was my pet baby. We will try it anyway, so you go ahead. Shaw was really very nice about it. Of course he thinks I am a mere crack-brained lunatic on the subject, but he said with great kindness that there was always a certain number of gold coins that had to be stored up in vaults, and that there was no earthly objection to having those coins as artistic as the Greeks could desire. (I am paraphrasing his words, of course.) I think it will seriously increase the mortality among the employees of the Mint at seeing such a desecration, but they will perish in a good cause!

Roosevelt's attitude was just what Saint-Gaudens had hoped for, of course, and on January 9th the sculptor wrote a telling letter to the President concerning the Mint:

> Your letter of January 6th is at hand. All right, I shall proceed on the lines we have agreed on. The models are both well in hand, but I assure you I feel mighty cheeky, so to speak, in attempting to line up with the Greek things. Well! Whatever I produce cannot be worse than the inanities now displayed on our coins, and we will at least have made an attempt in the right direction, and served the country by increasing the mortality at the Mint. There is one gentleman there, however, who, when he sees what is coming, may have "the nervous prostitution," as termed by a native here, but killed, no. He has been in that institution since the foundation of the government and will be found standing in its ruins.

On May 26, 1906, Roosevelt wrote to Saint-Gaudens to express his pleasure with the coinage design progress, noting that "it is one of the things in which I have taken the most genuine interest" and penning a postscript: "Use Latin or Arabic numerals as you think best, and could you show me the design when you get it ready." The President enclosed the letter he had written to Secretary Shaw to smooth the way for the sculptor:

> Referring to the Saint-Gaudens correspondence there does not seem to be any reason for not putting the date on the coin in numerals. Those numerals are Latin and our figures are Arabic. If Mr. Saint-Gaudens is clear that the effect would be better if numerals should be used, I should give him his head about it. In such case a "V" would have to be used and not a "U," because of the simple reason that it would actually be a "V" and not a "U" that he was trying to put on. "V" means five; "U" is not a numeral at all.
>
> I suppose you have sent Mr. Saint-Gaudens a permission to make a plaster cast of the present twenty-dollar gold piece.

While Roosevelt continued to display great enthusiasm, Saint-Gaudens was less sure that employees of the Mint could be persuaded to alter their traditional practices, as a letter to the President from the sculptor, dated May 28, 1906, indicates:

> I have your letter of May 26th enclosing a copy of your letter to Secretary Shaw of the same date.
>
> The reverse is done. But before showing it to you I wish you had the reductions made at the different reliefs. They will take some time. The obverse I am hard at work on. Its completion will not be delayed long and your "pet crime," as you call it, will be perpetrated as far as I am concerned.
>
> I have sent a practical man to Philadelphia to obtain all the details necessary for the carrying out of our scheme, but if you succeed in getting the best of the polite Mr. Barber down there, or the others in charge, you will have done a greater work than putting

through the Panama Canal. Nevertheless, I shall stick at it, even unto death.

Undaunted, Roosevelt volunteered to intervene at the Mint as soon as the sculptor thought it appropriate, as indicated in the President's letter of June 22, 1906:

> Don't forget to tell me when you want me to take up our brethren of the Mint and grapple with them on the subject of the coins.

Homer Saint-Gaudens, the sculptor's son, later wrote that the eagle to be used on the reverse of the gold coins, the $10 and $20 denominations being considered, posed particular problems. At first a flying eagle design, taken by Saint-Gaudens from the 1857 cent (the sculptor was perhaps unaware that in turn the cent design had been taken from the pattern 1836 silver dollar) was considered, but this was dropped (later to be resurrected for use on the $20) in favor of a standing eagle taken from a composite of designs used on the Shaw Memorial in Boston, the Roosevelt Inaugural Medal, and the shield of a monument to President Garfield in Philadelphia. "All in all, for the coins, he created seventy models of this bird, and often stood twenty-five of them in a row in his studio at Cornish for visitors to number according to preference," his son related.

On June 28, 1906, Saint-Gaudens wrote to Roosevelt:

> I thank you for your letter of June 22nd. I will certainly inform you when your help will be needed with our friends in Philadelphia.
>
> I am here on the sicklist, where I have to remain in the hands of the doctors until the first of August, but my mind is on the coins, which are in good hands at Windsor [the Vermont town across the river from Cornish, New Hampshire].
>
> The making of these designs is a great pleasure, but the job is even more serious than I anticipated. You may not recall that I told you I was "scared blue" at the thought of doing them; now that I have the opportunity, the responsibility looms up like a spectre.
>
> The eagle side of the gold piece is finished, and is undergoing the interminable experiments with reductions before I send it to you. The other side is well advanced.
>
> Now I am attacking the cent. It may interest you to know that on the "Liberty" side of the cent I am using a flying eagle, a modification of the device which was used on the cent of 1857. I had not seen that coin for many years, and was so impressed by it that I thought if carried out with some modifications, nothing better could be done. It is by all odds the best design on any American coin.

Saint-Gaudens originally envisioned redoing the entire American coinage from the cent onward, as the preceding reference to the cent indicates, but his extremely poor health precluded him from doing serious work on any but the larger gold coins. Following Saint-Gaudens' death in 1907, the other denominations were redesigned by different artists and sculptors, Bela Lyon Pratt doing the quarter eagle and half eagle in 1908, Victor D. Brenner the Lincoln cent in 1909, James Earle Fraser the buffalo nickel in 1913, and still others doing the silver coinage in 1916.

On July 20, 1906 Roosevelt wrote to Saint-Gaudens urging him to hurry with the coinage noting that "this summer is the best time to settle it, because I would like to do it free from all supervision by the co-ordinate branch!," a reference to Congress, which was not then in session. The sculptor was so ill that he enlisted his son Homer to reply to Roosevelt. The President replied in turn suggesting that action on the coinage be postponed until the next spring. In 1920 Homer Saint-Gaudens reminisced:

> The cause of most of the delay, however, was not due to the condition of the sculptor's health, but to the impossibility of a satisfactory understanding with the Mint authorities. First, the Philadelphia officials, as might have been expected, complained that they found the relief too high, and that the sculptor must lower it and sharpen the details. Knowing that such modification must surely hurt the merit of the result, the sculptor agreed, only to meet with three more successive complaints of the same nature. On the third occasion he brought two French coins — the gold 25 franc piece with the head by Chaplin, and the silver two-franc piece, with the figure of "The Sower" by Roti. Next he asked the Mint if they could strike what was struck abroad. Upon the Mint's replying "yes," he ascertained the depth of relief of the French coins, and brought his new models to a shade under that. But again the Mint proved recalcitrant; so the sculptor once more took his trouble to the President who . . . gleefully went to the mat with the old enemy.

Roosevelt's letter of October 1, 1906 displays continuing urgency:

> The Mint people have come down, as you can see from the enclosed letter which is in answer to a rather dictatorial one I sent to the secretary of the Treasury. When can we get the design for the twenty-dollar gold piece? I hate to have to put on the lettering, but under the law I have no alternative; yet in spite of the lettering I think, my dear sir, that you have given us a coin as wonderful as any of the old Greek coins. I do

not want to bother you, but do let me have it as quickly as possible. I would like to have the coin well on its way to completion by the time that Congress meets . . .

A subsequent letter from Roosevelt, dated December 11, 1906, displays still more urgency, probably because of the President's desire to have the situation completed before Congress met:

I hate to trouble you, but it is very important that I should have the models for these coins at once. How soon may I have them? . . .

The sculptor acted quickly, as his letter to Roosevelt dated December 19, 1906 indicates:

I am afraid from the letter sent you on the 14th with the models for the twenty-dollar gold piece that you will think the coin I sent you was unfinished. This is not the case. It is the final and completed model, but I hold myself in readiness to make any such modifications as may be required in the reproduction of the coin.

This will explain the words "test model" on the back of each model.

The adversary relationship that President Roosevelt and the sculptor had with the Mint is vividly demonstrated by an earlier communication, September 11, 1906, between Roosevelt and Leslie Mortier Shaw, secretary of the Treasury:

. . . now, a word as to my pet iniquity, the coinage, which I am getting Saint-Gaudens to start. I am afraid I shall have some difficulty with the Mint people, who are insisting that they cannot cut the coins as deep as they should be made. I enclose you a specimen, and I direct that Mr. Barber have the dies made as Saint-Gaudens, with my authority, presents them. Mr. Barber is quoted as saying that they could not cut them as deep as this. We then applied to Tiffany and Gorham, the two great silversmiths and jewellers of New York. Mr. Kunz of Tiffany, and Mr. Buck of Gorham's, at once stated that their houses could without difficulty at a single stroke make a cut as deep as this. Mr. Barber must at once get into communication with Tiffany and Gorham, unless he is prepared to make such a deep impression without such consultation. Will you find out from him how long it will take, when the full casts of the coins are furnished you by Saint-Gaudens, to get out the first of the new coins — that is, the twenty-dollar gold piece, which is the one I have most at heart? All I want to know from Mr. Barber is how long it will take to make them, and the cost; and if there is likely to be a long delay and seemingly too much expense I will want him to communicate with Messrs. Buck and Kunz. But if he has to communicate with them I should regard it as rather a black eye for the Mint and a confession of inferiority on their part to Tiffany and Gorham. Will you communicate all of this to the Mint people?

So, it was with a feeling of relief and satisfaction that Roosevelt wrote to Saint-Gaudens on December 20, 1906, after having seen the first models:

Those models are simply immense — if such a slang way of talking is permissible in reference to giving a modern nation one coinage at least which shall be as good as that of the ancient Greeks. I have instructed the director of the Mint that these dies are to be reproduced just as quickly as possible and just as they are. It is simply splendid. I suppose I shall be impeached for it in Congress; but I shall regard that as a very cheap payment!

On February 11, 1907 Saint-Gaudens wrote to Roosevelt concerning the Indian motif, intended at that time for use on the one-cent piece, but later used on the $10 regular issue (in addition to a pattern $20):

I have received your letter of February the 8th regarding the Indian feather headdress and its application to the one-cent piece. I have already begun the trial in the way you suggest, so it should not be long before I will be able to tell you of the result. I shall endeavor to let you know with the utmost possible dispatch.

President Roosevelt's enthusiasm for the Indian design rivaled his pleasure expressed earlier when he saw the $20 models, as his letter of February 18, 1907 to the sculptor indicates:

I wonder if I am one of those people of low appreciation of artistic things, against whom I have been inveighing! I like that feather head-dress so much that I have accepted that design of yours. Of course all the designs are conventional, as far as head-dresses go, because Liberty herself is conventional when embodied in a woman's head; and I don't see why we should not have a conventional head-dress of purely American type for the Liberty figure . . .

This issue of what was "purely American" and what wasn't came up once the public saw the finished $10 (with the Indian motif) and $20 (with the standing goddess motif) pieces, prompting the sculptor's son, Homer Saint-Gaudens, to later write:

The profile head Saint-Gaudens modelled in relief from a bust originally intended for the Sherman Victory, adding the feathers upon the President's suggestion. Many persons knew it as the "Mary Cunningham" design, because it was posed for by an Irish maid, when only a "pure American" should have served as a model for our national coin. As a matter of fact, the so-called features of the Irish girl appear scarcely the size of a pinhead upon the full-length Liberty, the body of which was posed for by a Swede. Also, the modern American blueblood may delight in

the discovery that the profile head [referring to the $10 issue] was modelled from a woman supposed to have Negro blood in her veins. Who other than an Indian may be a "pure American" is undetermined.

In reality, as in all examples of Saint-Gaudens' ideal sculpture, little or no resemblance can be traced to any model, since the least taint of what he called "personality" in such instances caused him to wholly discard the subject.

In March work was progressing on the Indian head design while at the same time the Mint was having problems striking the suggested $20 pieces. On March 12, 1907 Saint-Gaudens reported to Roosevelt:

I send today to the Mint the models of the twenty-dollar gold piece with the alterations that were indispensable if the coin was to be struck with one blow. There has been no change whatever in the design. It was simply a question of the thickness of the gold in certain places, and the weight of the pressure when the blow was struck.

I like so much the head with the head-dress (and by the way, I am very glad you suggested doing the head in that manner) that I should like very much to see it tried not only on the one-cent piece but also on the twenty-dollar gold piece, instead of the figure of Liberty. I am probably apprehensive and have lost sight of whatever are the merits or demerits of the Liberty side of the coin as it is now. My fear is that it does not "tell" enough, in contrast with the eagle on the other side. There will be no difficulty of that kind with the head alone, of its effectiveness I am certain.

Of course there is complete justification for the small figure with a large object on the other side in a great number of the Greek coins, and it is with that authority that I have proceeded.

This all means that I would like to have the Mint make a die of the head for the gold coin also, and then a choice can be made between the two when completed. If this meets with your approval, may I ask you to say so to Mr. Roberts, of the Mint? I have enclosed a copy of this letter to him. The only change necessary in the event of this being carried out will be the changing of the date from the Liberty side to the eagle side of the coin. This is a small matter . . .

Based upon the preceding correspondence the Mint prepared a piece which today ranks as the most important of all American gold patterns. Listed as Judd-1776 in *United States Pattern, Experimental and Trial Pieces*, the coin features on the obverse a woman wearing an Indian headdress with the word LIBERTY below. The date in Roman numerals was transferred to the reverse. Bearing the denomination TWENTY DOLLARS the piece was made only in pattern form. In 1981 this coin, considered unique, sold at public auction sale by Bowers & Ruddy Galleries for $475,000, the highest figure recorded up to that time for any coin ever struck by the United States Mint.

Correspondence continued on the subject of Miss Liberty with an Indian headdress, and on March 14, 1907 Roosevelt wrote to Saint-Gaudens as follows:

Many thanks for your letter of the 12th instant. Good! I have directed that be done at once. I am so glad you like the head of Liberty with the feather head-dress. Really, the feather head-dress can be treated as being the conventional cap of Liberty quite as much as if it was the Phrygian cap; and, after all, it is *our* Liberty not what the ancient Greeks and Romans miscalled by that title — and we are entitled to a typically American head-dress for the lady.

It simply proved too much for the Mint facilities to strike the high-relief $20 pieces at high speed on normal production presses using just one impact or blow. On May 8, 1907 Roosevelt conveyed news of the situation to the sculptor:

I am sorry to say I am having some real difficulties in connection with the striking of those gold coins. It has proved hitherto impossible to strike them by one blow, which is necessary under the conditions of making coins at the present day. I send you a copy of letters from the head of the Department of Coins and Medals of the British Museum, and from Comparetti [Comparette, curator of the Mint Collection, and a knowledgeable numismatist]. I am afraid it is not practicable to have the coins made if they are struck with more than one blow. Of course I can have a few hundreds of these beautiful coins made, but they will be merely souvenirs and medals, not part of the true coinage of the country. Would it be possible for you to come on to the Mint? I am sure that the Mint authorities now really desire to do whatever they can, and if it would be possible for you to go there I could arrange to have some of the Tiffany people there at the same time to see if there was anything practicable to be done . . .

To the letter was appended a postscript:

You will notice what Comparetti [sic] says about our country leading the way. I know our people now earnestly desire to do all they can; and I believe that with a slightly altered and lowered relief (and possibly a profile figure of Liberty) we can yet do the trick.

By this time Saint-Gaudens' health had worsened, and he was beset by pressures involving other unfinished commissions. On May 11, 1907 he wrote to Roosevelt:

I am extremely sorry that it will be wholly impossible for me to leave Windsor at present, but I am sending to Mr. Roberts, and if you so desire, to you, my assis-

tant, Mr. Hering, who understands the mechanical requirements of the coin far better than I.

After all the question is fairly simple, and I have not the slightest doubt that making the coins in low relief will settle the matter satisfactorily. Greatly as I should like to please you, I feel that I cannot now model another coin in profile for the twenty-dollar gold piece. Indeed, as far as I'm concerned, I should prefer seeing the head of Liberty [a reference to the Indian design] in place of any figure of Liberty on the twenty-dollar coin as well as on the one-cent. If the idea appeals to you, I would refine the modelling of the head now that I have seen it struck in the small, so as to bring it in scale with the eagle. I am grieved that the striking of the die did not bring better results. Evidently it is no trifling matter to make Greek art conform with modern numismatics.

The President liked the head of Liberty with its Indian headdress but also appreciated Saint-Gaudens' standing figure, as his letter to the sculptor dated May 12, 1907 shows:

All right. Your letter really makes me feel quite cheerful. I should be glad, if it is possible for you to do so, if you would "refine" the head of Liberty; but I want to keep the figure of Liberty for at least one small issue of the coins. I look forward to seeing Mr. Hering . . .

The sculptor's health was failing rapidly, and his last known letter to Roosevelt prior to his death (on August 3rd) is dated May 27, 1907:

Now that this business of the coinage is coming to an end and we understand how much relief can be practically stamped, I have been looking over the other models that I have made and there is no question in my mind that the standing eagle is the best. You have seen only the large model, and probably on seeing it in the small will have a different impression. The artists all prefer it, as I do, to the flying eagle.

First, in that it is more on a scale with the figure of Liberty on the other side.

Second, it eliminates the sunburst which is on both sides of the coin as it will be if adopted as settled up to now.

Third, it is more dignified and less inclined toward the sensational.

Fourth, it will occupy no more time to use this model than it will to do the other work that will be necessary, and I think it is a little more favorable for stamping.

The majority of the people that I show the work to evidently prefer with you the figure of Liberty to the head of Liberty and that I should not consider any further on the twenty-dollar gold coin.

Following Saint-Gaudens' death in August, a state of confusion reigned at the Mint. Reflective of this is a letter from President Roosevelt to Secretary of the Treasury George B. Cortelyou (who was named to the post in the same year), dated August 7, 1907:

. . . I do not want to wait about those new coins. I would like the Director of the Mint to go ahead with the dies of the coins as they now are, and then if experience shows that the clear cut finish must be obtained make the change in the original dies after submitting it to me. Mr. Saint-Gaudens is dead. I do not know whether there is any man associated with him to whom we can refer. One of his assistants [Henry Hering] has been in communication with the Mint authorities about this matter. Why don't they get in touch with him again? I am sure there has been goodwill upon the part of the Mint authorities, but I cannot help feeling there has been a certain cumbersomeness of mind and inability to do the speediest modern work, as shown by these delays. There must be no further delays. Let the two coins be finished and put into circulation at once; by September first. Then if experience shows, or even if experience does not show, that there should be a sharper outline, let the Mint authorities consult with the late Saint-Gaudens' assistant and prepare dies of a sharper cutting. There has been altogether too much delay about this matter and I want it finished immediately.

On August 14, 1907 Charles E. Barber forwarded a memorandum of the situation to John H. Landis, superintendent of the Philadelphia Mint:

I beg to state that the dies for the eagle coin, a new design, have been ready and awaiting approval since July 22nd, when some of the coins and plaster casts were submitted to the Director and also to Mr. Saint-Gaudens as he requested. Since that date there have been no instructions received regarding these coins. With the instructions just received "to go ahead with the dies as they now are" I beg to state that the dies are now ready for the eagle coin.

In regards to the double eagle, you will remember that dies have been made from models furnished by Mr. Saint-Gaudens and coins struck as medals and submitted to the Director with a full statement of the impossibility of using dies for coinage made from the models in their present state on account of the high relief.

The last this department heard on this subject was that Mr. Saint-Gaudens had seen the impossibility of coining high relief and had determined upon reducing the relief to within the requirements of modern coinage.

I have no model for the double eagle that can be used, for the reason above stated, namely, the relief being entirely too high.

I have been anticipating a new model that would not have this objectionable feature, but have not received such a one, therefore it is not in any sense the fault of this department that dies are not ready.

The appliances in this department for doing die work are of the most improved and have been used in

every possible way even to working day and night and Sundays to expedite this new coinage, and in the case of making the first reduction Mr. Saint-Gaudens reported that it would take six months to get it made in Paris, while I made it in one month.

I think this statement is necessary to clear up the idea that the Mint has caused any delay in the production of the new dies, as from the first I have had to wait upon Mr. Saint-Gaudens for models as I am now doing in the case of the double eagle.

Mr. Saint-Gaudens asked for samples of the models when reduced to the size of the double eagle and they were furnished, since that time I have heard nothing more of them and do not know whether he left other models or anyone to take up his work, and until the new and suitable models are sent, I am powerless to produce double eagle dies of the Saint-Gaudens model that can be used for coinage.

In the case of the eagle Mr. Saint-Gaudens reduced the model until with the aid of the new French reducing machine it was possible to make a die that would produce a coin; this has not been done with the double eagle models and until it is done my hands are tied.

I furnish you with this full statement of the present condition of the new designs and models and respectfully await your instructions as to who will supply the models for the double eagle, and also advise that if the models were here now, it would be utterly impossible to get ready to coin the double eagle by September first.

Landis on September 25, 1907 sent samples of the new $10 to Director Frank Leach with the following commentary:

I beg to enclose herewith for approval a specimen of the new eagle struck from the dies reduced from Saint-Gaudens' last model [the reference here is to the issue without periods]. I also enclose for comparison a specimen taken from the $315,000 in eagles now on hand of the first Saint-Gaudens' model as modified by Mr. Barber [the issue with periods and rolled edge].

You will notice that the eagle from the last model is a great improvement over those of the first model. The latter are indefinite in detail and outline, not being at all sharp and look like imperfect coins or coins that have been sweated, while the former is sharp in outline, the detail shows up well, the border is broad and prominent and the coins will stack perfectly.

We have on hand $315,000 of the first model, struck on the coining press, and $500, struck on the medal press. If this last model meets with your approval, I would strongly urge upon you the expediency of immediately replacing the $315,000, now on hand, of the first model with eagles of the last model. We have $100,000 in eagle blanks ready for coinage and a larger amount in strips and unadjusted blanks and are therefore ready to proceed with this coinage at short notice.

I think we will be severely criticized, and certainly deserve to be, if the eagles already struck should be allowed to go into circulation . . .

Today collectors recognize three main varieties of 1907 Saint-Gaudens eagles. Each has the motif, adopted as standard for circulation, of a woman with Indian headdress on the obverse and a standing eagle on the reverse.

The first variety has a wire edge or rim and has periods before and after the inscriptions on the reverse. Five-hundred specimens were struck, all with the same surface — a "satiny" finish which under magnification shows many swirling die preparation lines. Some cataloguers have designated unimpaired specimens as "Proofs," while others have called the same pieces "Uncirculated." David Akers notes that "whether or not the pieces technically qualify as Proofs or as Uncirculated pieces is hard to tell for certain, but based on the circumstances of their striking and their overall appearance, I feel it is likely that all 500 were Proofs and that distinctions between 'Proofs' and 'Uncirculateds' of this coin are erroneous; all specimens are essentially the same."

The second variety is of the rounded or rolled edge style with periods before and after the reverse inscriptions. The coinage of this variety has been stated as 31,550 pieces (per Landis' memorandum to Leach, September 25, 1907), 34,100 pieces (correspondence, subsequently reproduced in the present chapter, from Frank A. Leach), or, elsewhere, 20,000. Of the production, 50 were special Proofs struck on a medal press. Mint officials were fearful of criticism, and virtually the entire issue was melted. The number saved was apparently not recorded, but Frank Leach placed the quantity as 42. Again, the distinction between Uncirculated and Proof issues is not well defined, with the *Guide Book of United States Coins*, to cite one reference, designating the preservation of the 42 pieces as Proofs, while David Akers, as per the following quotation, indicates that some business strikes were saved as well as a few Proofs: "The number saved from the melting pot is unknown but it probably was on the order of 40 to 50 pieces. Most of them are very high quality and a number are superb. In addition, a few of the Proofs are also known, perhaps as many as four or five."

The July 1946 issue of *The Numismatic Review* reproduced a letter dated April 21, 1925, from

1907 Wire Edge With Periods $10

(See Color Photo)

1682 **1907 Saint-Gaudens Indian design. Wire edge. Periods before and after legends.**

The present coin is a **Choice Uncirculated** example and is one of the finest surviving pieces. Its pedigree is unsurpassed: it was obtained by Robert Garrett from Frank A. Leach, director of the mint.

On February 28, 1908, Henry Chapman furnished Robert Garrett with information concerning the 1907 gold issues. This correspondence is quoted on page 475 of *The History of United States Coinage as Illustrated by the Garrett Collection* and is reprinted herewith:

> I wish to give you some information. If you will act quickly upon it I think we will secure for you a couple of coins which are worth large sums. In fact, I have paid $150 cash for one of them myself. The director of the mint, Mr. Frank A Leach, at Washington, has in his possession, and is distributing at face value, to collectors or public museums, to the latter he writes me more especially than to the former, special $10 gold pieces of the Saint-Gaudens design, 1907.
>
> If you will write him and ask him to send you a specimen of the $10 gold piece, Saint-Gaudens design 1907, from die No. 1 *without any border,* and die No. 2, with a wire or thin edge, you might say to him that you have been informed that he has a few of these for distribution to collections which are exhibited to the public. I would tell him that your collection is on exhibition at Princeton College and that you would like to have him send you them. Send him $20 in gold notes and 12c in postage stamps, and I think you will succeed. Do not mention my name or your source of information.
>
> Of the coin without the border, 500 were made, of number 2 only 50 were kept out of several thousand that were minted. The rest were melted.
>
> As he has but a few of the wire edge, which he refuses to let me have a specimen of, I would suggest that you write immediately upon receipt of this. If you can bring to bear any influence of your senator or congressman, it might be well to do so, but I think that it is possible you will get them without bringing anyone else into the matter, which might cause delay. If you succeed in getting them, you are going to get two coins worth $400 . . .

The low mintage of 500 pieces, the unique edge treatment, and the presence of periods before and after the E PLURIBUS UNUM legend are factors which have combined to make this a classic 20th-century American gold rarity.

Obtained by Robert Garrett directly from Frank A. Leach, director of the mint, as noted.

Description of the 1907 Saint-Gaudens $10 with wire edge and periods sold by Bowers & Ruddy Galleries in 1980 as part of the Garrett Collection. Some information concerning original distribution of the issues is quoted.

Frank A. Leach, who was Director of the Mint from September 19, 1907 to July 31, 1909, to a Mr. Burns, shedding light on the production of 1907 eagles:

> I was most pleased to hear from you. I do not have the catalogue you speak of, but I know that the coin [Saint-Gaudens' ten dollar piece] you have is one of the second strikes of which 34,100 pieces were struck. They were found to be impracticable and I ordered them to be remelted which was done under my official supervision. They were struck before I assumed duty as Director, and only a few pieces had got out through the President and others connected with designing the coin and could not be recalled. As the matter of remelting the issue of the second strike came up at or about the time of the meeting of the Assay Commission it occurred to me to present one to each of the Commission in lieu of the usual medal, or in addition, I forget which. These and the pieces that were given out through the President number 42.
>
> Of the first lot, 500 pieces were struck, but this was some months before my time and I cannot give the details so clearly, but it is my recollection that they were all given out and none remelted, consequently the second lot is more rare.
>
> It is not proper to call the second issue "pattern pieces" for they were struck for circulation and I question the propriety of so styling the first lot, unless the term is synonymous with "trial." The second lot were not even "trial" pieces. The large number struck is sufficient denial of that . . .

When eagles of the Saint-Gaudens style were eventually produced for circulation, neither of the preceding designs was used. Instead, a new variety without periods on the reverse and with a normal rim (neither a wire rim nor a definitely rounded rim) were made to the extent of 239,406 pieces. Like the limited-edition experimental pieces before them, and like the contemporary $20 issues, IN GOD WE TRUST was omitted.

This omission caused quite a stir, and pressure was put on members of Congress to restore the traditional motto. Roosevelt maintained his stance, as indicated in a letter dated November 11, 1907 to Rev. Roland C. Dryer of Nunda, New York, one of many who protested the new coinage:

> When the question of the new coinage came up we lookt into the law and found there was no warrant therein for putting "IN GOD WE TRUST" on the coins. As the custom, altho without legal warrant, had grown up, however, I might have felt at liberty to keep the inscription had I approved of its being on the coinage. But as I did not approve of it, I did not direct that it should again be put on. Of course the matter of the law is absolutely in the hands of Congress, and any direction of Congress in the matter will be immediately obeyed. At present, as I have said, there is no warrant in law for the inscription.
>
> My own feeling in the matter is due to my very firm conviction that to put such a motto on coins, or to use it in any kindred manner, not only does no good but does positive harm, and is in effect irreverence which comes dangerously close to sacrilege. A beautiful and solemn sentence such as the one in question should be treated and uttered only with that fine reverence which necessarily implies a certain exaltation of spirit. Any use which tends to cheapen it, and, above all, any use which tends to secure its being treated in a spirit of levity, is from every standpoint profoundly to be regretted. It is a motto which it is indeed well to have inscribed on our great national monuments, in our temples of justice, in our legislative halls, and in buildings such as those at West Point and Annapolis — in short, wherever it will tend to arouse and inspire a lofty emotion in those who look thereon. But it seems to me eminently unwise to cheapen such a motto by use on coins, just as it would be to cheapen it by use on postage stamps, or in advertisements. As regards to its use on the coinage we have actual experience by which to go. In all my life I have never heard any human being speak reverently of this motto on the coins or show any signs of its having appealed to any high emotion in him. But I have literally hundreds of times heard it used as an occasion of, and incitement to, the sneering ridicule which it is above all things undesirable that so beautiful and exalted a phrase should excite. For example, thruout the long contest, extending over several decades, on the free coinage question, the existence of this motto on the coins was a constant source of jest and ridicule; and this was unavoidable. Everyone must remember the innumerable cartoons and articles based on phrases like "In God We Trust for the other eight cents;" "In God We Trust for the short weight;" "In God We Trust for the thirty-seven cents we do not pay," and so forth and so forth. Surely I am well within bounds when I say that a use of the phrase which invites constant levity of this type is most undesirable. If Congress alters the law and directs me to replace on the coins the sentence in question the direction will be immediately put into effect; but I very earnestly trust that the religious sentiment of the country, the spirit of reverence in the country, will prevent any such action being taken.

In 1908 Saint-Gaudens $10 issues without the motto were struck in Philadelphia and Denver during the early part of the year. Over the wishes of Roosevelt, Congress passed legislation requiring use of IN GOD WE TRUST on the nation's coinage, with the result that subsequent Philadelphia and Denver mint issues of the same year bore the motto, as did an issue produced in San Francisco. The controversy faded, and from that point onward the motto remained.

Coinage of the type was continuous and substantial through 1915, after which time only 1916-S, 1920-S, 1926, 1930-S, 1932, and 1933 issues were produced. The lowest regular mintage in the entire series from 1907 through 1933 proved to be 1911-D at 30,100 pieces, followed by 1908 without motto at 33,500 coins and 1911-S at 51,000. The most generous mintage was 1932, of which 4,463,000 were struck, followed by 1910-D (2,356,640) and 1926 (1,014,000). All other mintages were less than a million.

Indian head eagles of 1916 and earlier years exist today in approximate proportion to their mintages, for specimens were actively put into the channels of commerce and distributed to banks. After 1916 the mintages of 1920-S (126,500), 1926 (1,014,000), 1930-S (96,000), 1932 (4,463,000), and 1933 (312,500) can be related to rarity, but only to a degree. Today 1932 ranks as the most commonly seen of the issue, as the mintage figure would indicate. 1926 is likewise common. 1920-S is viewed as a great rarity, even though the mintage is higher than numerous "common" issues of earlier dates (1909-D, for example, with a mintage of 121,540, is frequently seen). 1930-S is elusive, and 1933 is the prime rarity in the series. When Franklin Delano Roosevelt's Executive Order pertaining to gold coins was issued, few 1933 eagles had reached commercial channels. David Akers estimates that perhaps just 30 to 40 coins were released. Of these, only a dozen or so can be traced today.

The 1933 eagle has the distinction of being the latest-dated collectible United States regular issue gold coin. The only other denomination produced that year was the double eagle, of which 445,500 were made. According to the United States government no examples were placed into circulation, and the several 1933 double eagles which have come to light since the date of issue have been viewed as illegally held, a situation disputed by knowledgeable numismatists. With the coinage of the 1933 eagle and double eagle, America's proud heritage of circulating gold coins, instituted in 1795, came to an end.

Observations concerning Proof eagles closely parallel those made for other Proof denominations. Virtually all issues are exceedingly rare, and the mintage figures are not necessarily an indication of the number known to exist today. The earliest-dated Proof eagle is the 1804 with plain 4 in date, a coin not struck until three decades later (see earlier commentary). When Coronet style eagles were first produced in 1838 a number of Proofs were made, of which just three can be traced today:

1. The Smithsonian Institution example.

2. The coin formerly in the collection of Cardinal Francis Spellman, later appearing in the Davies-Niewoehner Sale.

3. The John Jay Pittman Collection coin, earlier owned by Co. E. H. R. Green and King Farouk.

Of the following year, 1839 (style of 1838), just three Proofs can be traced, including an example in the Smithsonian Institution and one in the Eliasberg Collection.

Proofs of eagles in the 1840s are nearly as rare as the proverbial hen's teeth, with just one recorded for 1840, two of 1842 (small date), five or six of 1843, three or four of 1844, and so on. No Proofs are known of 1849, 1850, 1851, 1852, or 1853. In 1854 a specimen Proof set, including gold coins, was furnished to the city of Bremen, Germany, but the eagle from this set cannot be traced now. 1855 represents a comparable situation; Wayte Raymond reported having seen one years ago, but its location today is unknown. Likewise, Raymond, once one of America's most prominent dealers (he was especially active circa 1912-1953), reported a Proof 1856, but no one knows where it is at the present time.

The only 1857 Proof eagle that can be traced is the Ten Eyck Collection specimen sold by B. Max Mehl in 1922, later in the John Clapp Collection, acquired by Louis Eliasberg when the former's holdings were purchased in their entirety in the 1940s. Several Proofs are known of the famous 1858 (well-known because of its low mintage of business strikes), including examples impounded in the Smithsonian Institution and the American Numismatic Society.

Mintage figures have been recorded for issues after 1858: 1859 (80 Proofs), 1860 (50), 1861 (69), 1862 (35), 1863 (30), 1864 (50), 1865 (25), 1866 (30), 1867 (50), 1868 (25), 1869 (25), 1870 (35), 1871 (30), 1872 (30), 1873 (25), 1874 (20), 1875 (20), 1876 (45), 1877 (20), and 1878 (20). After the last-mentioned year mintages trended upward. As is the case with Proofs of other denominations, the mintages tell only part of the story. Apparently not all were sold, and of those that were sold, many were simply spent in an era in

This remarkable and previously unpublished photograph shows freshly-minted coins stored at the San Francisco Mint in 1930. In the corner are piled 192 bags, 500 coins per bag, each labeled: "S. F. Mint, $5000, EAGLES, 1930." Presumably this golden repository comprised the entire published mintage of 96,000 1930-S $10 pieces! It is believed that nearly all of these went to the melting pot after 1933, for today 1930-S is recognized as an extremely rare variety. (Bureau of the Mint)

which pieces brought little on the resale market. For example, when the collection of Col. Mendes I. Cohen was sold in 1875, certain Proof gold coins brought less than their original cost at the Mint!

The present-day rarity of certain Proof eagles from the era is pointed up by the studies of David Akers. Of the 1859 Proof, a coin of which 80 were struck, he notes that "as many as nine or ten Proofs may exist, including two virtually perfect specimens, previously unreported, that are in the Royal London Mint's collection. No Choice Proof has appeared at auction in years . . ." For the 1860 Proof eagle Akers notes that "it is likely that some, if not most, of the 50 struck were not sold and were later melted. No more than ten or eleven can be accounted for today."

The desirability of certain Proofs has been compounded by low regular mintages. For example, of the 1873 eagle just 800 business strikes plus 25 Proofs were coined. Business strikes exist today to the extent of a dozen or so pieces, and only a half dozen or so Proofs can be traced. Thus, there is extraordinary interest whenever a Proof is offered.

The outstanding example of this is the 1875, a coin of which just 100 business strikes and only 20 Proofs were made. The few available Proofs, great rarities by virtue of their low mintage to begin with and even lower survival rate, are in double demand as business strikes are even rarer today.

After 1878, Proof mintage figures increased: 1879 (30 Proofs made), 1880 (36), and so on through 1900, when production peaked at 120 Proof examples. Proofs of the later years of the Coronet style are rarer than the mintages indicate for two reasons enumerated earlier: first, not all were sold at the Mint, and, second, of those that were sold, many were simply spent as their market value at the time was low.

Proofs distributed in gold sets of 1907 were of the Coronet type. Certain of the 1907 Saint-Gaudens issue with periods before and after the reverse legend were "special strikings," as the earlier text indicates, but the distinction between Proof and Uncirculated is not well defined by collectors today. Certainly the surfaces are neither mirrorlike, as in the old style, nor matte, as in the later style.

Eagle Proofs of 1908, minted to the extent of 116 pieces, are of the style with motto on the reverse. Proofs were made continuously through 1915, with a high of 204 pieces reported for 1910 and lows of 74 examples in 1909, 71 in 1913, only 50 in 1914, and 75 in 1915.

The finish of these issues varies from year to year, as it does with the earlier-described gold Proof quarter eagles and half eagles, and includes Matte, Roman or Satin, and Sandblast surfaces. At the time such non-mirrorlike Proofs were not popular with collectors, so more than is true of the earlier series, mintages for 1908-1915 Proof eagles bear little relation to the number known today. David Akers' comment concerning the most "common" issue (from the standpoint of the published 204 mintage figure), 1910, is relevant:

> Proofs of 1910 are of the Roman or Satin finish type and are much more rare than the high mintage would indicate. Since 1910 Proofs are similar in rarity to those of 1909 as well as the Matte Proofs from 1911 to 1915, and more rare than the Proofs of 1908, it is probable that either the 204 mintage figure is in error or (more likely) that the majority of the mintage was melted and never sold to collectors. Because of their similarity in appearance to regular business strikes, it is also possible that the Satin Proofs suffered an unusually high attrition rate over the years.

Today, Proofs of all gold coins 1908-1915 are among the very rarest twentieth-century American numismatic issues. Often a span of years will elapse between offerings of a given variety at auction.

While a few wealthy collectors aspire to own one of each date and mintmark variety of eagles from 1795 to 1933, the greatest demand on the present market comes from builders of type sets. Some who have the necessary means have endeavored to complete collections of later-date eagles of the Saint-Gaudens type, 1907 through 1933. Certain more common issues among the earlier Saint-Gaudens pieces are devilishly difficult to acquire in Choice Uncirculated grade, for the relief and design of the pieces is such that a limited amount of circulation or contact with other coins in a mint bag gives them a nicked and worn appearance. The only Choice Uncirculated coins seen with any degree of regularity are 1926 and 1932.

Double Eagles

11

The largest and most impressive of all regular United States coinage denominations, the double eagle, containing nearly one ounce of gold, has always been a favorite with numismatists. Today sufficient specimens exist that the type coin collector will have no difficulty assembling a group of the basic designs, but for the date and mintmark collector — yes, collecting these large and valuable pieces by varieties has been the pursuit of many over the years — there are a number of extreme challenges.

The Mint Act of April 2, 1792, which laid the foundation for United States coinage, provided for the gold $10 or eagle as the highest denomination. Apparently little thought at the time was given to a larger coin.

On December 21, 1836 the *Philadelphia Public Ledger* proposed a $20 coin to be called a *double eagle:*

> . . . if we are to have larger coins, let them be in gold. In addition to the eagle, which has the size of the half dollar, we would recommend the double eagle, which of the size of our silver dollar would contain the value of twenty.

The birth of the double eagle had to wait another decade, however. The January 1848 discovery of gold in the race of Sutter's mill on the American River in California set in motion a chain of events which over the next several years saw a tremendous increase in the world's supply of the precious yellow metal. By 1849-1850 gold reached the eastern markets in quantity. In relation to silver, gold became "common," with the result that silver issues traded at a premium (coinage legislation of 1853, which reduced the authorized weights of silver coins, eventually remedied the problem).

On January 22, 1849 James McKay, then in his ninth and final term as a Democratic representative from North Carolina, announced he would soon introduce legislation providing for an entirely new gold denomination, the dollar. On January 25th the bill was introduced. After the required second reading it was referred to the House Ways and Means Committee which McKay chaired. On February 1st Charles G. Atherton, a Democratic representative from New Hampshire, reported a bill which provided for the coinage of another new denomination, the $20 piece, in addition to the earlier-proposed gold dollar. The McKay and Atherton proposals were studied, with the result that on February 20th McKay reported that his earlier proposal had been amended, probably as a result of the Atherton effort, to include the double eagle.

Debate ensued, with Joseph R. Ingersoll, a Whig representative from Pennsylvania, caustically noting that:

> It seems great coins [double eagles] are to be issued as well as small ones [gold dollars]. If eagles' wings are to be clipped down to a standard so small that they will fail to perform their office from their insignificance, they are, as the bill proposes, to be doubled into a ponderous and unparalleled size. Bad as the increase of metal is, it is not half so bad as its wasteful diminution . . . Ponderous coinage once existed among a simple and warlike people. If it is to be introduced again, iron or tobacco will suit as well as gold.

After further debate the double eagle amendment was adopted by the House of Representatives. With little resistance the Senate agreed to the coinage proposal, and on March 3, 1849 legislation providing for the minting of gold dollars and double eagles became a reality.

The basic reason for double eagle coinage was

sound. With ever-increasing amounts of gold bullion coming into the market, it was desirable to convert as much into coins as possible, with the least amount of effort. By striking $20 pieces twice as much coinage value could be produced as could be by striking $10 pieces with the same facilities, or four times as much value could be produced than by striking $5 coins. In a similar vein, nearly three decades later in 1878 when the Bland-Allison Act provided for the conversion of tremendous amounts of silver into coins it was decided that the silver dollar, the largest denomination in that metal, be used, with the logical assumption that this represented the least amount of coining effort.

In California, source of the burgeoning gold supply, private coiners and the United States Assay Office of Gold came to the same conclusion and issued many varieties of $20 pieces as well as $50 coins. One private coiner, Templeton Reid, issued a $25 gold coin, a denomination not otherwise used.

As noted in the earlier chapter on gold dollars, the task of engraving dies for the new denominations fell to James B. Longacre, who was unpopular with Director of the Mint Robert M. Patterson, Chief Coiner Franklin Peale, and certain others at the Mint. These Mint officials conspired to make life as difficult as possible for Longacre, whose inexperience with engraving coinage dies compounded the problem. The story of the preparation of the double eagle dies was told by Longacre in a report submitted the following year, excerpted herewith:

> . . . I proceeded as well as I was able with the work necessary to produce the dies for the double eagle. I made a design and model of the reverse. The plan of operation selected for me was to have an electrotype mould made from my model, in copper, to serve as a pattern for a cast in iron. The operations of the galvanic battery for this purpose were conducted in the apartments of the chief coiner. The galvanic process failed; my model was destroyed in the operation. [Don Taxay, in *U. S. Mint and Coinage*, observes that coiner Franklin Peale's "adoption of a process not normally used at the Mint, together with its catastrophic failure, seems more than coincidental under the circumstances."] I had, however, taken the precaution to make a cast in plaster from my model, previous to subjecting it to the action of a galvanic battery. From this cast, as the only alternative, I procured a metallic one which, however, was not perfect; but I thought I should be able to correct the imperfections in the engraving of the die with more economy of time than in making a new model; this was a laborious task, but seasonably completed, entirely by my own hand. The die had then to be hardened in the coining department; it unluckily split in the process.
>
> I had then to go to work with depressed spirit to overcome this unexpected misfortune to my work. When I had got through this, the original die was still to be finished for the head, and all the hubs to be made. For all this no assistance was yet provided for me, nor was it until late in October that I received authority to procure it. I had then to look for one qualified for the work, and at liberty to undertake it. Through the good offices of my friend, Mr. Wright, of New York, I was, in November last, enabled to obtain the services of a young man whom I had instructed, and who has rendered me valuable aid. But the days had now become short and dark, and the light of my only room in the Mint was frequently rendered more obscure by the smoke of the steam engines and the melting and refining furnaces.
>
> The dies were finished and struck in December; but then I perceived that I had overrated the power of the coining press used for striking, in making the relief of the head too high to come up full under the pressure that was employed. To accommodate the relief to the power of the press I found it necessary to work over the face again. This was not the most certain or agreeable course to me, but I adopted it at the time. On the 12th of January last I was ready for another trial; but I found no material in readiness, no gold prepared in the coining department, where the trial had to be made. This was a delay over which I had no control, and it was not until the 26th of the same month that I could obtain the second trial. The impressions taken were objected to by the chief coiner as still not coming up sufficiently under the pressure applied. I wished to make the dies perfectly adapted to the power of the press used in coining (I saw no other defect than a slight one of fullness in the center of the piece) and only regretted the additional delay that must ensue. I asked this officer for one of the gold pieces then struck, to guide me intelligently in the very delicate operations yet required; he declined on the grounds of difficulty in his accounts. I offered to deposit the value from my own pocket with no other view than to facilitate the public issue of the coin; he still declined absolutely and on any terms to allow me temporary use of one of the pieces for my purpose. I asked him what he expected me to do under such circumstances. With some hesitation he observed that I might have an impression taken in silver. This alternative, though not satisfactory or even safe to me, I was constrained to accept. The piece I had the opportunity of showing you on the 13th inst. was one of them obtained, by which you may form a tolerable judgment of the state of the dies from which it was taken . . .
>
> In the operations of the Royal Mint of Great Britain and I believe in most others, the right to decide upon the fitness of the dies for coining rests with the engraver whose reputation is chiefly concerned, but a

different order seems to be established here.

The impressions taken from my dies at the trial, last mentioned, appeared to me equal to those of most of the coins in previous use. I regret that the unpleasant circumstances to which I have adverted deprived me of the satisfaction of submitting one to your inspection.

Under a fair trial I have now fears for the fitness of the dies I have now on hand and nearly ready, being the third pair finished by me.

Until very recently I felt myself equal to all the work of the Mint put on me unaided. I asked for no help until I thought myself over tasked. I have never hesitated to undertake, nor intentionally delay, any labor pertaining to my office . . .

Longacre went on to discuss his view of the duties of a Mint engraver:

The law providing for the office of "engraver of the Mint" makes no allusion to that primitive branch of art called die sinking, and the omission appears to me judicious. For these reasons, the mere die sinker in this country is rarely an educated artist, and the work to be done in intaglio which is what I understood by die-sinking, forms but a minor part of the duties of the office, the work in cameo [relief] being equally artistic and more laborious. In fact, the engraver of the Mint, to discharge his duties intelligently, should be a designer and a modeler and possess a general knowledge of numismatics and heraldry. On my first introduction to the office I was officially informed that the most important qualification was modeling, and I believe I have not much cause to fear competition in this branch of art.

By December 22, 1849 trial pieces of the double eagle had been produced, for on that date Director Patterson wrote to the secretary of the Treasury:

After a long delay, which it was not in my power to control, I am at length able to send you the enclosed double eagle and to refer it to your judgment. If it meets your approbation, I must beg that you will let me know at the earliest time, in order that as many of these coins as possible may be struck in the few days that remain of the present year.

It turned out that the double eagle was not ready to be born, for major problems still remained concerning the relief of the dies and the inability of the coins to strike up properly, as a letter from Franklin Peale, chief coiner, to Patterson, December 24, 1849 indicates:

It is with extreme regret and after the most earnest endeavors to overcome the difficulty that I am compelled to inform you that the impression upon the new die, for the double eagle, cannot be brought up by the usual coining processes. The depth of the head of the obverse is such that the steel will not sustain the degree of pressure necessary for a perfect impression. To this is to be added the minor disadvantage of the projection of the head beyond the border of the coin, preventing its being "pile" (as is technically expressed) and exposing it to abrasion.

This caused Patterson to have second thoughts, and on Christmas Day 1849 he wrote again to the secretary of the Treasury enclosing Peale's letter:

On the 22nd inst., I had the honor to send you a double eagle and to refer it to your judgment. The specimen had been struck with a heavy hand press. Since then a number have been coined by the ordinary steam press and the unhappy result has been reported to me, by the chief coiner in the letter which I send enclosed. I think it proves that the obverse die is too high for coinage and that a new one must be made. If the time required for the work by the engraver of the Mint may be judged from that engraved on the former, the delay will be very considerable.

Subsequently an effort was made to replace Longacre with Charles Cushing Wright (who historians today consider to be one of the most talented of all die cutters of the mid-nineteenth century), for one, being solicited for the post at $2000 salary per year, with the enticement of an "easy" job: "The duties occupy very little time, except when original dies are to be made."

Wright agreed to accept the position, but Longacre, alerted to the precariousness of the situation, enlisted political help in Washington and retained his post.

By the end of 1849 at least two gold impressions of the 1849-dated double eagle dies had been preserved, one of which was sent to Secretary of the Treasury W. M. Meredith and the other of which was placed in the Mint Collection. Today the Meredith specimen is untraced. The Mint Collection piece is a featured exhibit at the Smithsonian Institution.

On December 25, 1849, as earlier noted, Director Patterson informed Meredith that "a number [of 1849 double eagles] have been coined by the ordinary steam press and the unhappy result has been reported to me . . ." It is presumed that these specimens were destroyed.

On January 12, 1850, Longacre completed the second obverse die for the double eagle. The lower relief head contrasted with the high-relief 1849 which would not stack properly. On January 26th several gold impressions were made and kept by Franklin Peale, who denied Longacre's request for a study example. From January 27th through the 30th a third obverse was

made with slightly different features and with the relief lower than on the preceding.

On March 12, 1850 the dies were found to be acceptable, and quantity production of 1850 double eagles for circulation commenced. During the first year, 1,170,261 were struck at Philadelphia and 141,000 at New Orleans. During the next two years, 1851 and 1852, production crossed the two million mark in each instance. Clearly the double eagle was serving its purpose: to coin a large amount of gold by the most efficient means.

Throughout the 1850s production remained high, with the greatest quantities of double eagles being struck at the Philadelphia and San Francisco mints. At New Orleans pieces were struck each year from 1850 until the Civil War forced suspension in 1861. Among the New Orleans issues many rarities are recognized by numismatists today. 1854-O, a coin of which just 3,250 were struck, is a landmark. Fewer than two dozen specimens are known to exist, of which the majority are Very Fine to Extremely Fine. 1856-O, of which 2,250 were minted, is the rarest New Orleans issue and in fact is one of the most elusive pieces in the entire double eagle series. Approximately 15 pieces are known to exist.

From the standpoint of high condition there are many rarities among issues of the various mints struck during the 1850s. David Akers analyzed offerings in 443 auction sales, major and minor, and was able to trace only two Uncirculated examples of 1850-O, eight of 1851-O, six 1853-O, just one 1854-O, no examples of 1855-O, one 1856-O, three 1857-O, five 1858-O, one 1859, and two 1859-O. These findings give a more generous picture than the true number known to exist, for grading has tightened in recent years (many specimens designated as "Uncirculated" decades ago would not qualify for that classification today) and, equally important, the survey includes reappearances of the same coins.

An example of the exceedingly rare Uncirculated 1859-O was catalogued by the writer for a 1974 auction. It had been found in the South buried on a plantation, where it had been interred with other coins when the owner concealed his wealth prior to departing for duty in the Civil War. As fate would have it, he lost his life, and the coins remained undiscovered for the next century.

Uncirculated examples of 1854-S exist to the extent of several dozen pieces. All examples seen by the author show microscopic evidence of seawater etching, giving the pieces a "matte" appearance. David Akers calls these coins "saltwater Uncirculated." It is presumed that these were rescued some time in the 1970s (at least that is when they first started turning up) from an underwater grave, perhaps part of the cargo of a sunken ship. Another story is that they were found between the studs of a San Francisco building when it was demolished, but this is doubtful for such storage would not have etched the surface. Treasure troves such as this are exceedingly difficult to study, for the finders, fearful of taxation, disputed property rights, and other considerations, often will not disclose the true story.

A somewhat related circumstance involves 1855-S and 1856-S "saltwater Uncirculated" double eagles. Several dozen of these turned up around 1970 and were mainly distributed by Florida and Georgia dealers. It was said that they formed part of the cargo of gold coins shipped from San Francisco around Cape Horn to pay the garrison at Fort St. Augustine, Florida, but that rough weather was encountered and the ship sank off the Florida coast. The author purchased a number of these and was promised the "full story" with all of the details, including the ship name, location, and so on, but despite repeated requests to the seller, such information never materialized.

In an article, "The Story of the United States Double Eagle" (*Numismatic Scrapbook Magazine*, November 1959), Lynn Glaser wrote of a minor panic which took place at the Philadelphia Mint in 1860. Details of the situation are also related in Dr. J. Hewitt Judd's *United States Pattern, Experimental, and Trial Pieces.*

It seems that sophisticated counterfeits of double eagles were being circulated. These were made in a clever manner by taking Mint-struck $20 pieces (and to an extent $10 and, to a lesser extent, $5 coins) and sawing them so as to separate the obverse and reverse. The insides were then ground or scraped out, leaving a recess. Into the space a disc of platinum, metal slightly heavier than gold but worth only about a third as much, was inserted. The two halves and the platinum disc were then cemented together, and the edge was given a new treatment, resulting in a double eagle which, unless it was weighed, could

TWENTY DOLLARS

The twenty-dollar gold piece, or "double eagle," was authorized by act of Congress dated March 3, 1849. The coin was to have a weight of 516 grains and a fineness of .900. It was issued continuously from 1849 up to the present time. James B. Longacre was the designer, and with but few alterations the type was continued to 1907, when it was superseded by the St. Gaudens design. Not many of the double eagles command a premium, for the reason that there are only a few collectors who gather the denomination. Nevertheless, this series embraces what is regarded as one of the highest valued coins in the world—the double eagle of 1849, of which only a single specimen was made in gold. This piece is now on exhibition at the Philadelphia mint. One collector is credited with having offered the Government authorities $75,000 for the rare coin, but of course without avail. It was not until late in 1849 that the die was completed for the coin, and before arrangements were made for striking double eagles for circulation the year 1850 came in. Consequently a new die had to be made. The 1850 double eagle is very nearly like that of 1849. The only alteration was to lower the relief of the cheek of Liberty, which stands out prominently on the 1849 piece. There are a few varieties of the St. Gaudens double eagle which command a premium. These are herewith mentioned.

$20. 1849. Only one struck.

$20. St. Gaudens. 1907. Wire edge, Chapman, 1908..... $35.00
$20. 1907. Smooth edge, Chapman, 1908..... 30.00
$20. 1907. Similar, but in lower relief. The one issued for general circulation, Chapman, 1908..... 20.50

The double eagle page in the 1909 Adams guide to gold coin prices indicates that "not many of the double eagles command a premium, for the reason that there are only a few collectors who gather the denomination." As was true of other gold series, this philosophy was to have important implications years later when coins that might have been retrieved in 1909 were destroyed, melted, or otherwise irretrievably lost.

not be told from the genuine except by the most accomplished expert. The situation was perceived to be so serious that the chief coiner said that he would not accept a double eagle in payment for anything, not even his salary, unless he personally saw it come from the coining press!

It was remembered that Dr. J. T. Barclay had visited the Mint earlier with some novel ideas concerning the prevention of clipping, shaving, and otherwise removing precious metal from coins. His ideas included striking coins with intaglio (recessed) inscriptions or on very broad, thin planchets. After studying the counterfeits Barclay made these recommendations:

1. The double eagle should be completely discontinued with the exception of specimen strikings sold to collectors as part of Proof sets.

2. If the double eagle had to be coined, it should be thinner and of larger diameter.

3. Or, the double eagle could be produced in an extremely concave format with the features in high relief.

4. Raised lettered edges were to be used on each coin, making it difficult for counterfeiters to duplicate such devices.

5. Coins could be made with holes in the center or with a saucerlike shape.

6. The devices and the inscriptions could be intaglio.

From Barclay's suggestions the Mint produced several patterns, including broad, thin $5 pieces, in 1860 and 1861. After the initial furor, the Mint turned its interests elsewhere, as counterfeit production apparently ceased and, at the same time, the value of platinum rose thus making it unattractive for use as a filler.

In 1859 James Ross Snowden, director of the Mint, sought to change the designs of certain denominations. The half dollar and double eagle in particular were candidates for revision, and extensive patterns were prepared. Anthony C. Paquet, who was appointed assistant engraver on October 20, 1857, was assigned to the task, as was Longacre. It fell to Paquet to produce a new double eagle obverse. The result, issued only in pattern form, depicted the seated figure of Liberty with her right hand supporting a fasces and the left a shield. Behind the shield was a small perched eagle. A new reverse employing a heavy wreath with interior inscriptions was designed. Upon consideration it was felt that the new work was no improvement over the old standard design, so nothing further was done. Subsequently Paquet turned his hand to modifying Longacre's standard reverse, with the result that a slightly altered design, differing mainly in having the border inscriptions in taller letters and narrower denticles on the border, was produced. Examples of the Paquet reverse modification were struck in pattern form in 1859 and 1860. A unique gold impression with the latter date, considered a pattern, is in the collection of the Smithsonian Institution. Another Paquet die for the double eagle reverse, displaying a perched eagle with drooping wings, was used to prepare uniface strikings but was never seriously intended for coinage (refer to Appendix A in the Judd book).

Late in 1860 Paquet's modification of Longacre's standard reverse design was adopted for use in regular coinage. Dies were furnished to the branch mints at New Orleans and San Francisco. The fact that the reverse field was wider than the obverse field, resulting in extremely narrow milling on the reverse (a situation leading to excessive die wear and breakage), was overlooked until January 5, 1861 when coins were struck on high-speed production presses for the first time. Early impressions had been made using medal presses.

Director Snowden wrote on that date to William A. Elmore, superintendent of the New Orleans Mint:

> In preparing the new dies for 1861 a slight deviation in the diameter of the double eagle was made. As it is highly important that a proper uniformity should be maintained, I telegraphed you today to "use the old reverse and not the new ones." This you will continue to do. If you require any additional reverses they will be furnished on your requisition.

In December three reverse dies had been shipped to New Orleans, together with a note stating that "the reverse of the double eagle is from a new original die and will require modification of the milling to suit the border — note to coiner."

Apparently the message was received in New Orleans prior to striking double eagles for circulation, so no 1861-O Paquet reverse coins were made.

San Francisco was a different story, however. At the time Snowden countermanded the use of the new reverse die, telegraph lines did not ex-

tend west of St. Joseph, Missouri, so messages beyond that point had to travel by horse and rider. It was not until nearly a month later that San Francisco received the news, by which time 19,250 1861-S Paquet reverse pieces had been struck. The superintendent of the San Francisco Mint wrote to Snowden on February 9, 1861:

> I have the honor to acknowledge the receipt of your favor of the 5th ulto., "overland," which however did not come to hand until the 2nd inst.
>
> I was, therefore, unable to prevent the striking and issuing of a large number of double eagles, coined with the new dies. The amount issued was $385,000.

Today several dozen 1861-S Paquet double eagles are known to exist, all of which are in circulated grades, Very Fine to Extremely Fine being the average. The distinction between the 1861-S reverse types — regular and Paquet — was not widely publicized until the 1940s and 1950s, with the result that when Lynn Glaser studied the series in 1959 he stated that "today there are six or seven 1861-S Paquets known." David Akers' study, advance proofs of which were furnished to the author prior to scheduled publication in 1982, showed 45 specimens appearing at public auction sale, with most records in the period since 1960. This figure included duplicate appearances of certain coins.

Two examples are known of the 1861 Philadelphia double eagle with Paquet reverse, but whether or not these pieces were intended as patterns or as regular issues is not known. The variety has received virtually no publicity in the past, with the result that documentation concerning it is vague. The Norweb Collection coin is believed to trace its ancestry to F. C. C. Boyd, Waldo C. Newcomer, William H. Woodin, and Lorin G. Parmelee. David Akers states that "the Parmelee coin was undoubtedly the piece from an 1865 Woodward sale (March 20th of that year) where it appeared as Lot 2818 and sold for $37 (quite a high price for the time — remember this was only four years after the coin was struck) to a 'Mr. French.'"

The second coin is reported by David Akers to have been purchased by Paul Wittlin, overseas buyer for Paramount International Coin Corporation, in Paris in the mid-1960s for $7,500. It then passed to Ben Dreiske, the Chicago dealer (and one of the founders of Rarcoa), for $12,500. Ten years later, according to David Akers, it was sold into a Dallas, Texas collection "for a sum reportedly in excess of a quarter of a million dollars."

During the 1860s, despite the suspension of specie payments, double eagle production continued strong, with San Francisco registering the greatest amount of coinage (as was generally true of other denominations as well). It is reasonable to conjecture that the Union used these pieces for international transactions, for overseas vendors were suspicious of paper money.

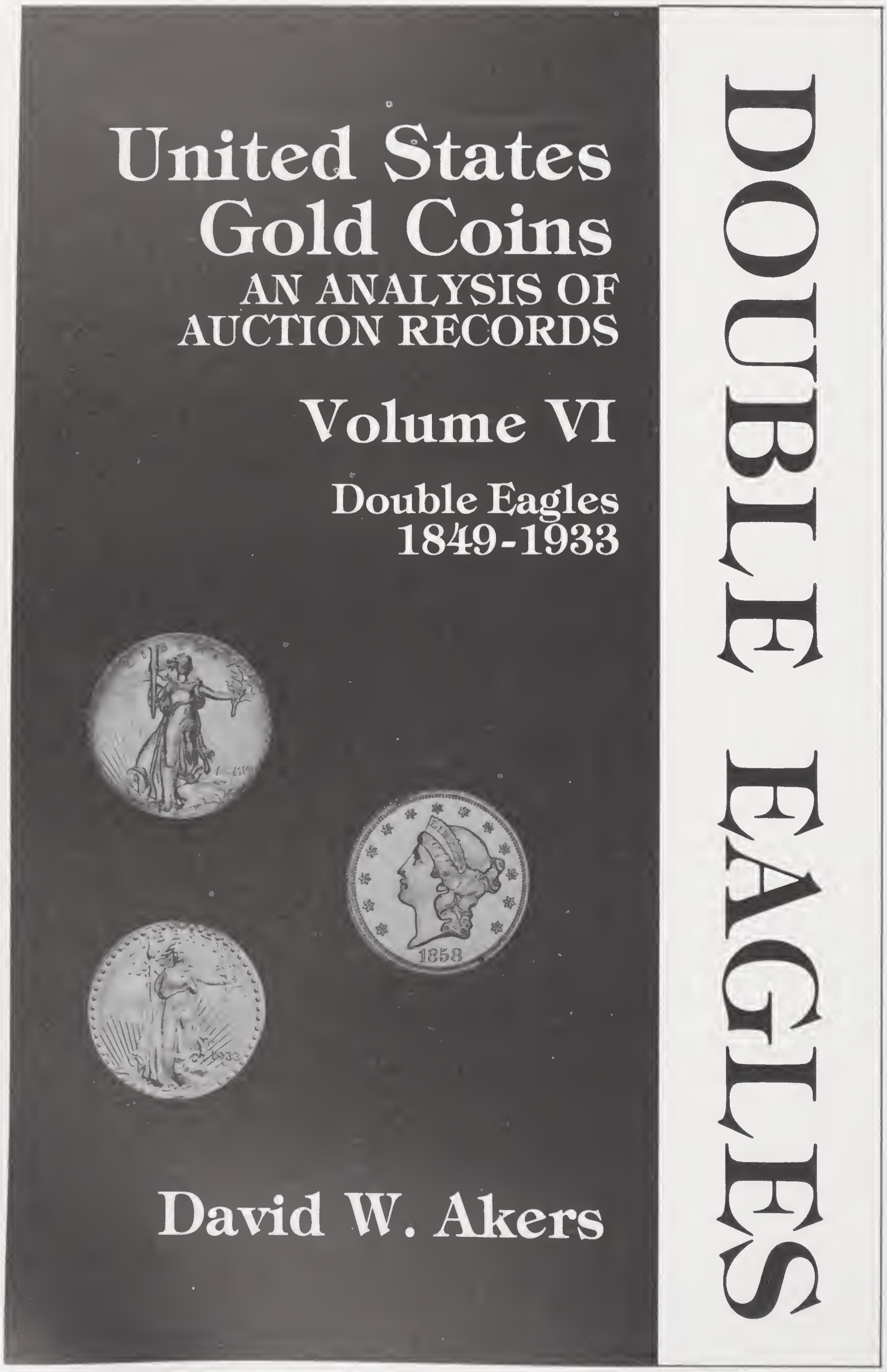
In 1866 the motto IN GOD WE TRUST was added to the reverse of the double eagle. All issues from this date to the end of the Liberty head series in 1907 bear the inscription. However, a few 1866-S double eagles were struck without the motto, from dies on hand before the new dies were received from Philadelphia (where dies for branch mints are produced). From the standpoint of coins existing today in Uncirculated grade there are many elusive issues of the mid and late 1860s, but in terms of warn specimens there are no extreme rarities. 1866-S without motto is considered to be scarce.

In 1870 the Carson City Mint struck coins for the first time. Double eagles with "CC" mintmarks were produced through 1879, again from 1882 through 1885, and finally from 1889 through 1893. Carson City mintages tended to be low, with 1870-CC (3,789 minted) recognized today as the prime rarity in the group. Of this coin fewer than two dozen are known today. Other elusive Carson City pieces include 1878-CC (13,180 struck), 1879-CC (10,708), 1885-CC (9,450), and 1891-CC (5,000).

From the 1870s onward double eagles were stored in quantities by overseas banks, the United States Treasury, and others, with the result that Uncirculated pieces, usually with heavy bagmarks, often appear on the market, although certain issues are rarer than others.

In 1877 the reverse of the double eagle was again modified, and the denomination was changed from TWENTY D. to TWENTY DOLLARS. This was the last change of the Liberty head format.

From the 1870s through 1907 production of double eagles was generous; however, certain varieties were produced in limited quantities. 1879-O (2,325 minted), 1881 (2,260), 1882 (630), 1883 (92), 1884 (71), 1885 (828), 1886 (1,106), 1887 (121), 1891 (1,442), and 1892 (4,523) are to-



Cover of one of David W. Akers' books analyzing auction records of various United States gold coin denominations. Each series is treated in turn: gold dollars, quarter eagles, $3 pieces, $4 stellas, half eagles, and double eagles.

day considered rarities, although Proofs struck at the Philadelphia Mint (included in the total mintage figures) provide an additional source of pieces.

The high water mark in Liberty head double eagle coinage occurred in 1904 when 6,256,797 pieces (including 98 Proofs) were struck. Today this date is exceedingly common in Uncirculated grade. As is true of other double eagles of the era, vast quantities were shipped overseas where they remained until recent decades. The result is fortunate for collectors: coins which would have been melted by the United States Treasury in 1934 are now available.

Double eagles were struck at the Denver Mint for the first time in 1906. 1906-D and 1907-D represent the only Liberty head issues from that location. The bullion was derived in part from the Cripple Creek Gold District, a locale which expanded greatly around the turn of the century and which was once called "the world's greatest gold camp."

In 1905 President Theodore Roosevelt enlisted the talents of his sculptor friend Augustus Saint-Gaudens, of Cornish, New Hampshire, to improve the nation's coinage designs. For the sum of $5,000 Saint-Gaudens agreed to produce motifs in sculptured high relief similar in concept to ancient Greek issues which both Roosevelt and Saint-Gaudens admired. The detailed story of the inception of this coinage is related in the preceding chapter on $10 pieces.

Frank A. Leach, a California publisher and writer, served as director of the Mint from September 19, 1907 to July 31, 1909. Years later he told the story of his life in a book, *Recollections of a Newspaperman*. His version of the Saint-Gaudens double eagle story makes interesting reading today:

> Another very important matter was in hand in the bureau when I arrived at Washington, which was soon to give me some anxiety, and that was the perfection of President Roosevelt's scheme for new designs for all the gold coins of our country. There were a number of prominent people in the East, especially in New York and Boston, who sometime before began an agitation for an improvement in the appearance of all our coinage. The President quickly became the leading spirit of the movement. The prevalent idea in this undertaking was that the design and execution of our coinage were inferior and inartistic when compared to those of ancient Greece, and as the coins used by a nation are one of the most enduring records of the art and mechanical skill of its age, our government should make an issue of coinage that would leave to future generations and ages something that would more truthfully and correctly reflect the artistic taste and mechanical ability of our day than the coinage then in use, unchanged for so many years. The admiration for the ancient Greek coins unwittingly influenced those gentlemen to suggestions that were imitative rather than original. They wanted the designs for the proposed coinage to be brought out in high relief, or with medallic effect, like the designs on the ancient coins. The commercial use and requirements seemed to have been lost sight of in the enthusiasm of producing a highly artistic coin; but in all probability none of the leading spirits in the movement was familiar with the use of metallic money, and did not understand that the proposed high relief would make the face of the coins so uneven that the pieces would not "stack," which was a condition fatal to the practicability of the idea.
>
> It was early in the year 1905 that President Roosevelt authorized the director of the Mint to conclude a contract with the famous sculptor, Saint-Gaudens, to supply designs in high relief for the $20 and $10 gold coins. This was accomplished in July, but no designs were finally perfected that met the approval of the President until the early part of 1907. The first model was a design for the double eagle, or $20 piece. Dies from the model were made at the Philadelphia Mint. On trial, the dies gave such a high relief to the figures on the design that all efforts to produce a perfect or satisfactory coin on the regular coining presses were ineffectual. A medal press was then resorted to, that the beauty of the design might be studied and be preserved in the shape of a coin, but even by this process it required about twelve blows or impressions in the press for each piece, with an annealing process between each stroke of the process. The annealing process consists of heating the coin to a cherry-red heat and cooling it in a diluted solution of acid. This process eliminates the copper alloy on the surface of the coin and leaves the piece covered with a thin film of pure gold. As a work of art the pieces were beautiful, but had more the appearance of medals than coins for daily use. Nineteen pieces only from this model were struck on the medal press, and these were subsequently given to Mint and Washington officials connected with the work. [The reference here is to the MCMVII pieces known as "extremely high relief" or "ultra high relief" issues by collectors today.]
>
> There were some who thought that by reducing the diameter of the piece to about the size of a "checker," with a corresponding increase in thickness, the much desired high relief might be struck on the ordinary coin press; accordingly, dies were made and several pieces struck, when it was discovered that the coinage act, passed in 1890, prohibited the change of the diameter of any coin. Thirteen pieces were struck from this small die for the thick or checker pieces, but with the exception of two coins placed in the cabinet or collection of coins at the Philadelphia Mint, all of

these pieces were melted and destroyed on account of the improper or illegal dimensions.

Saint-Gaudens then attempted to facilitate the work of coinage by supplying another or second set of models with the relief reduced to some extent, but satisfactory results were not obtained on the regular coinage presses. He then made a third model with still further and greater reduction of the high relief. The failure gave rise to considerable friction between the artist and the Mint authorities. The President had become impatient and began to think that the Mint officials were not showing a zeal in the work that promised results. It was at this stage of the undertaking that I came into the office of director. Before I had become familiar with my surroundings the President sent for me. In the interview that followed he told me what he wanted, and what the failures and his disappointments had been, and proceeded to advise me as to what I should do to accomplish the purpose determined upon the way of the new coinage. In this talk he suggested some details of actions of a drastic character for my guidance, which he was positive were necessary to be adopted before success could be had. All this was delivered in his usual vigorous way, emphasizing many points by hammering on the desk with his fist. This was my first interview with the President, and it was somewhat embarrassing for me to oppose his views, but I felt that it was essential to my success that I should be untrammelled by any interference in the plans that I should adopt to secure the production of the new coinage. I determined then and there that if I could not have free rein in the matter I would not attempt the work. In my reply to the President I finally made the wisdom of my position clear to him. I explained to him how I had not yet had time to look into the matter and locate the causes of failure, consequently could not say what was necessary to correct them. At any rate, I would have to insist that these were matters of details that should be left to my judgment.

"All you want, Mr. President," I said, "is the production of the coin with the new design, is it not?"

"Yes," said he.

"Well, that I promise you."

He said that he guessed I was right in my attitude on the matter, but I think he was not very confident of my getting results, for when a few days later I laid upon his desk a sample of beautifully executed double eagles of the Saint-Gaudens design, he was most enthusiastic in his expression of pleasure and satisfaction. I certainly believed him when he declared he was "delighted." He warmly congratulated me on my success, and was most complimentary in his comments.

"Now," said he, "I want enough of these coins within thirty days to make a distribution throughout the country, that the people may see what they are like." I replied that we would be able to meet with his desire, although I explained that this issue would have to be struck on medal presses from the second design model, but that in a few weeks later we would have dies completed for model number three with lower relief, so that the coins, when made, would meet the requirements of the bankers and businessmen in "stacking," etc, and these could be struck on the regular coin presses in the usual way.

The pleasure of the President was manifested in the heartiness of his thanks. I had every medal press in the Philadelphia Mint put into operation on these coins with an extra force of workmen, so that the presses were run night and day. The officers of the Mint entered into the spirit of the work cut out for them, putting a zest into the operations which assured me that the issue of the new double eagles, so greatly desired by the President, would be made on time. In fact, we delivered to the treasurer of the United States 12,153 double eagles, representing $243,060, which was considerably more than asked of us, several days ahead of time. I came in for more compliments from the President. In his enthusiastic way he introduced me to several of his Cabinet officers who were present in his office, as a "man who got results."

The coins of this issue, when made available to the public, were much sought after by people who wanted to keep them as souvenirs or as additions to numismatic collections. [The pieces referred to here are the "regular" MCMVII issues in high relief.] Contrary to expectations, a premium was demanded by dealers soon after the distribution began, and by the time it was ended the premium had increased to about an average of $15 on a piece. The newspapers gave much space to criticism, both by their own editors and from correspondents. Opinions as to the merits of the new coin were fairly well divided. The artistic appearance of the coin was generally recognized, but it could scarcely claim a popular reception. The design of the eagle on the reverse side of the coin was the object of much adverse comment. Saint-Gaudens did not use any originality in this design of the eagle, but simply copied that used on the penny coined in 1857, following the feature of the bird with its talons extended backward under the tail feathers, instead of being drawn up under the breast, the position most generally observed in birds of prey when flying about.

While discussing with the President the criticism by the public, I spoke of the position of the talons as being incorrect. This the President promptly denied, and said that if I would visit the large aviary at Rock Creek Park I would find the eagles flying about just as represented by the Saint-Gaudens design. I did not know then that the President was such a close observer of things in nature, and, having doubts as to the accuracy of his opinion, I went to the aviary as he had suggested. I did not have to wait to be convinced of the correctness of the President's assertion, for the very first flight of an eagle across the aviary showed the talons extended out behind, in the manner of a crane or gull.

The greatest extent of unpleasant criticism over the

new issue was aroused by the discovery that the motto "In God We Trust" had been omitted from it. The President's mail, as well as that of the secretary of the Treasury, was flooded with letters, some mild and many bitter, in protest against the removal of the motto. So loud became this protest that the President felt called upon to defend the omission, in a statement to the press, wherein he took the position that it was a profane use of the name of God, and the motto had been very properly omitted. He could have made an explanation that would have silenced all criticism and relieved himself of the responsibility for the omission if he had referred his critics to coinage acts of the government.

The statutes of the United States supply the only words and mottoes that shall appear on the various coins authorized by the act of Congress. For many years the motto "In God We Trust" was included with other word requirements by law. In 1890 the coinage act was changed in several particulars, and when the re-enactment was completed the motto in question, whether by design or accident, had been omitted . . . When this was understood, an appeal was made to Congress, and that body quickly authorized the restoration of the words "In God We Trust."

While the people were talking about the new coins, the Mint officials were busy working on the dies for model number three, and their efforts to produce them on the ordinary coining presses were finally crowned with success, and by the latter part of December the Mint presses were striking off new double eagles at the rate of about $1,000,000 daily . . .

Today collectors recognize several major varieties of the 1907 Saint-Gaudens issues. Of the early style with the date in Roman numerals, MCMVII, there are two:

The first, the so-called extremely high relief (or ultra high relief), is the type which required many blows on the medal press, with annealing between each impression, to strike up properly. The exact number minted will probably never be known, but those connected with the government have given such figures as 16, 18, 19, and 22. It is believed that additional pieces were restruck clandestinely in later years, but the number was probably very small. Approximately a dozen to fifteen examples are believed to be known, with a half dozen or so others reported to exist, including examples in a Pennsylvania hoard. Examples all have a satin finish and are designated as "Proofs." While most examples have E PLURIBUS UNUM lettered on the edge, at least one has a plain edge.

The second major variety with the MCMVII date is the "regular" high relief style. There are two subvarieties, one with a flat rim and the other with a wire rim. Some examples have a partial wire rim. 11,250 (Frank Leach reported 12,153, a larger amount) were struck and placed into circulation. As Leach wrote, pieces were in immediate demand as souvenirs and collectors' items, and soon a premium was placed on them. Examples seen today are with a satiny surface designated as "Uncirculated," with some being described as "Proofs." The distinction is not clearly defined. An interesting example of the confusion in this regard is a coin sold as a Proof in 1970, resold as an Uncirculated piece in 1974, described again as a Proof in 1978, and then resold as Uncirculated, the last time with considerable controversy, in 1981!

As each "regular" high relief MCMVII piece required three impressions of the coining die, the style was soon discontinued. In addition, few citizens could quickly determine that the date MCMVII translated to "1907," so the Roman numeral format was abandoned. Later in the same year the third variety of the Saint-Gaudens coinage was introduced, the low-relief style of which 361,667 were stuck. This design was continued in use through 1933.

In 1908, following the striking of pieces without the motto in Philadelphia and Denver, IN GOD WE TRUST was incorporated into the design, and additional pieces were struck at Philadelphia, Denver, and San Francisco. From 1907 through 1911 the design has a border of 46 stars around the obverse. From 1912 onward the number count is 48.

Large quantities of Saint-Gaudens double eagles were struck during the 'teens and 'twenties. Low recorded mintages during that period include 1908-S (22,000), 1909-D (52,500), 1913-S (34,000), and 1914 (95,320). The most generous mintage is that of 1928: 8,816,000.

The Saint-Gaudens $10 and $20 pieces were struck with raised devices on the edges, using a 3-part segmented collar, a departure from the reeded edge of earlier issues.

Curiously, mintage has little to do with rarity so far as the present supply of Saint-Gaudens double eagles is concerned. 1908-S, the lowest-mintage date, is readily obtainable and is viewed as being of just medium scarcity. On the other hand, 1927-D, of which 180,000 were struck, is one of the most awesome rarities in the American

gold coinage series. Fewer than a dozen are believed to exist. During the 1920s when the 1927-D and other issues were produced, especially 1924-D, 1924-S, 1925-D, 1925-S, 1926-D, 1926-S, and 1927-S, few specimens were released into circulation. The average American citizen at the time did not use double eagles in daily transactions. Paper money had long since reached a level of public acceptance, and there was no need for heavy, cumbersome gold coins. Around Christmas it was the custom for many to give gold coins as gifts. In certain areas of the West gold coins, like silver dollars, saw limited circulation, but by and large such pieces were unknown to the average citizen. And yet there was a demand for them, as the impressive coinage of over eight million 1928 double eagles demonstrates. Production went to two main places: Treasury vaults and to foreign banks. Those held by the Treasury were melted in 1934. Those shipped overseas remained in strong hands and escaped destruction. By the 1940s an interest in collecting double eagles by date and mint variety had strongly developed in the United States. Collectors quickly ascertained that there were a number of major rarities, especially 1924-S and 1926-D. The 1927-D, today considered to be the rarest Saint-Gaudens issue, was considered elusive but hardly in a class with 1924-S and 1926-D. Around the same time bankers in Switzerland, Argentina, Venezuela, France, and elsewhere began to realize that certain American double eagles, if found, were worth several hundred dollars to over $1,000 if they were rare dates. Searching began, and before long quantities of 1924-S, 1926-D, and other rare issues of the 1920s appeared on the American market.

This procedure was still going on in 1959 when Lynn Glaser wrote his study on the series for *The Numismatic Scrapbook Magazine*. His comments are relevant:

> If you have an old catalogue around you may have noticed the fact that several of the branch mint double eagles until recently were nearly unobtainable. The reason is that these dates, namely 1913-S, 1924-D, 1924-S, 1926-S, 1926-D, 1927-D, 1932-D, and a few others had been saved from the year of issue by Swiss, Belgian, and French banks as bullion. Recently they have been found in quantities of about 12 to 50 or so (sufficient to alter the market). This is similar to the bust type half dollars which were found in vaults of old banks that failed during the Depression, or the silver dollars which are gradually being released by the Treasury Department today.

Writing on the same subject in 1982 David Akers observed the following:

> Prior to the early 1950s, the 1924-S was generally considered to be one of the rarest of all Saint-Gaudens double eagles, if not *the* rarest. In particular the 1924-S was widely thought to be far more rare than the 1927-D, and only the 1926-D was talked about in the same reverent tones. The 1922-S, 1925-D, 1926-S, and 1927-S are also considered great rarities of that time. Surprisingly, in the 1940s, the 1920-S, 1931, and 1932, now highly regarded dates, were not put in the same rarity class as any of the foregoing issues. Most of the great sales of the 1940s — Dunham, Bell, Flanagan, Atwater, World's Greatest, etc. — were all missing this date, and the first appearance of a 1924-S at auction occurred at the 1947 Buffalo ANA Convention where the C. David Pierce specimen brought a phenomenal $2250. Dr. Green's coin was sold at auction in 1949, and then the Menjou specimen brought $2000 in 1950. In the latter sale, the cataloguers, Abe Kosoff and Abner Kreisberg, noted that the 1924-S was "the rarest of all double eagles; there are perhaps less than five extant."
>
> A few years later a small quantity of 1924-S double eagles was discovered, removing the 1924-S from the "extremely rare" category. Then in the 1960s many were found in Europe, and the 1924-S is now correctly viewed as a scarce date, but certainly not a rare one . . .

It is safe to surmise that by now most if not all overseas hoards of double eagles have been carefully examined. Following the popularization of jet travel in the early 1960s, and the attendant ease with which travel to foreign lands could be accomplished, American coin dealers were sometimes more numerous in Zurich than in New York! A stray discovery here and there may yet remain to be made, but the writer doubts if there will be any fundamental alteration of rarity ratings.

Today among the later Saint-Gaudens coins the most elusive issues are considered to be the 1920-S, 1921 (a date which has always been elusive; no significant number came to light in Europe), 1927-D, 1927-S, 1929, 1930-S, 1931, 1931-D, and 1932. Most known specimens of later issues are in Uncirculated grade.

The 1933 double eagle is a story in itself. In that year 445,500 were coined. Two examples were given to the Smithsonian Institution, and 29 others were reserved for the Assay Commission. Exactly what happened to certain pieces from the 445,469 remaining is not known today. Some "escaped," either legally or illegally, and reached numismatists. David Akers relates that during the

DOUBLE EAGLE; DENVER MINT

Estimate Price — *Selling Price*

1044

1044

1926

This double eagle, the 1926 Denver mint coin, is one of the two rarest coins in the entire series, the other being the 1924-S. We consider the 1926-D to be more rare than the 1921 Philadelphia. Our conclusion is based on contacts with some of our finest cabinets. Our estimate

$1,500 00 — $1300.00

In 1946, when the Numismatic Gallery offered the "World's Greatest U. S. Gold Coins" for sale one of the featured coins, shown on the reproduced catalogue page above, was the 1926-D double eagle, a piece at that time considered to be one of the rarest issues in this series.

late 1930s and early 1940s there were a number of private transactions involving 1933 double eagles, with Col. James W. Flanagan, for one, paying $2200 for his example. "Other specimens traded hands as well, always privately but often as the result of a published advertisement, at prices from $1000 to $2200. No one thought anything at the time about the possible illegality of owning a 1933 double eagle, and the coin was considered to be one of the rarest (but not *the* rarest) Saint-Gaudens double eagles," Akers has written.

In 1944 the Flanagan Collection was auctioned by Stack's. The Treasury Department learned of the 1933 double eagle, concluded that it had been obtained illegally, and confiscated the piece. Going on a "witch hunt," Treasury agents contacted coin dealers seeking information concerning other 1933 double eagle transactions. By this method apparently several additional specimens were found, confiscated, and presumably destroyed. One numismatist, L. G. Barnard of Memphis, Tennessee, contested the seizure in court, and after a great expense lost his case. Louis Eliasberg, the famed Baltimore numismatist, owned one and gave it to the government.

Nearly a decade later the collection of Egypt's playboy monarch, King Farouk, was sold at auction. Included was a 1933 double eagle. The Treasury Department learned of the coin and asked the Egyptian government to withdraw the piece, which was done. Apparently the coin was never given to the Treasury, however, so perhaps it will surface sometime in the future.

The number of 1933 double eagles known today? Stack's estimated in 1944 that they knew of eight to ten specimens, and in 1982 David Akers wrote that it was his guess that "no more than five or six 1933 double eagles still exist."

A case could be made for the legality of the 1933 double eagle. In 1933, following the striking of several hundred thousand pieces for circulation, it would have been possible for a visitor to the Treasury Department or to the Mint to have obtained one by paying face value for it. It was common practice, for example, for the curator of the Mint Collection to provide specimens to various museum, university, and other public collections. At least two examples of the 1927-D double eagle were distributed this way during the year of issue. No thought would have been given at the time that 1933 double eagles would be great rarities. "You can't fight city hall," and any collector with a 1933 double eagle has kept it underground, knowing that the Treasury Department, if it persisted, could easily cause a defendant to incur untold amounts in legal bills, whether or not the defendant's case had validity. It might be appropriate to mention that at one time Treasury agents zealously confiscated Confederate States of America paper money, claiming that the United States government, rightful heir to Confederate property, owned all of it. In the process many valuable notes were destroyed. The same position was once taken for pattern coins, and misguided Treasury officials declared them illegal for a brief time.

Proofs were made of certain early dates in the double eagle series, but all are extreme rarities today. A unique 1849 Proof double eagle, considered a pattern, is part of the Smithsonian Collection. As noted in the preceding text, the relief is higher than on the subsequent regular issues. At least two 1850 Proof double eagles are reported in the literature, but none has surfaced in recent years, and these cannot be verified. No Proofs can be traced of 1851, 1852, 1853, 1854 (although at least one was struck, the example included in a Proof set made for the city of Bremen, Germany), 1855, 1856, or 1857. Presumably a few scattered Proofs may have been struck during these years, but they have disappeared in the sands of time.

Of the 1858 double eagle, David Akers states that three Proofs exist, two of which are permanently impounded in the Smithsonian Institution and the American Numismatic Society.

Proof mintages are recorded for dates after 1858: 1859 (80 Proofs), 1860 (59), 1861 (66), 1862 (35), 1863 (30), 1864 (50), 1865 (25), 1866 (30), 1867 (50), 1868 (25), 1869 (25), 1870 (35), 1871 (30), 1872 (30), 1873 (25), 1874 (20), and 1875 (20). In 1876 the Proof mintage increased to 45, perhaps as a result of interest engendered by the Centennial Exhibition. Then the Proof striking receded to just 20 in 1877 and a like number in 1878. After that time production figures trended upward, with 30 reported for 1879 rising to a high of 121 in 1887. After that time Proof mintages varied greatly, with 52 pieces reported for 1891, 93 for 1892, 59 for 1893, and so on. The highest point was reached in 1903 when 158 were struck. As is true of other gold denomina-

THE EXCESSIVELY RARE 1933 DOUBLE EAGLE

1681 1933 Brilliant uncirculated. Perfect gem with the full mint bloom, the last year of issue. Although this is the first one that ever came up in any public auction and there is not a price set on this in the standard catalog we know that 8 or ten of the pieces were sold for privately from $1,000.00 to $2200.00. This piece has cost the Col. the tidy sum of $2200.00 which has set a new high for this coin. He paid this price to one of our leading dealers in the south. Excessively rare and in great demand, no buy orders on this particular coin will be accepted (——)

END OF SALE

THANK YOU

Description of Lot 1681, a 1933 double eagle, from Stack's sale of the Col. James W. Flanagan Collection, March 1944.

While today (1982) a good case can be made for the legality of certain 1933 double eagles, during the 1940s the Treasury Department took the position that such coins were held without government permission. The Flanagan piece was seized as were several other examples.

tions, the number of pieces struck has little relevance to the number known to exist today. In earlier times it was customary to strike a quantity of Proof double eagles, keep them "on the shelf" so to speak, and distribute them as sales occurred. More often than not, quantities went to the melting pot at year's end. In addition, of the Proofs that were distributed, many were simply "spent" in later years, for there was little numismatic premium for them. As recently as 1920 certain Proof double eagles were valued on a *retail* basis at less than $25 a coin, with the wholesale market, if any, being face value or only slightly above. Faced with such a reception, a collector could realize more by spending coins than including them in an auction sale!

David Akers notes that of the 50 examples struck in 1864 only about a dozen still exist. Of the 1865 Proof, just seven or eight are believed to exist, and other issues of the time are likewise exceedingly elusive. Among later Liberty head Proofs, those from the 1880s onward, more survive, but in absolute terms they still are rare.

Certain Philadelphia Mint issues recorded very low business strike mintages, with the result that tremendous demand and price pressure has been put on the Proofs. The ultimate situations exist with 1883 (92 coins minted that year, all Proofs), 1884 (just 71 coins produced, all Proofs), and 1887 (121 coins produced, all Proofs). Any collector desiring a complete date and mint set of double eagles must necessarily acquire Proofs of these dates. Other issues are nearly as rare. For example, of the 1882 double eagle, just 571 business strikes plus 59 Proofs were made. As the business strikes were not intentionally saved, they are exceedingly rare today, placing great demand upon the few remaining Proofs. Again we turn to David Akers, who writes concerning the 1882:

> Proofs and business strikes are similar in rarity although there may well be a few more Proofs than business strikes. I estimate that there are approximately 13 to 15 Proofs and perhaps 10 to 12 business strikes in existence . . . As an interesting note on this date, I mention that I have seen a "love token" made from a Proof 1882 double eagle. The obverse is very choice with all of its original Proof surface, while the reverse is beautifully engraved!

Proofs included in 1907 sets were of the Liberty head type. Various Saint-Gaudens issues, particularly the MCMVII Roman numeral issues, have from time to time been described as Proofs, but for the 11,250 "regular" high relief pieces made for circulation, the distinction between Uncirculated and Proof issues is obscure, as noted earlier. Of the 1907 Arabic date Saint-Gaudens double eagle in low relief a few Matte Proofs have been reported in the literature, with Walter Breen verifying with certainty just two examples, a unique piece with large edge letters and one with regular edge lettering.

Proofs were made of the Matte, Roman or Satin, and Sandblast finishes from 1908 through 1915. The mintages were modest in each instance: 1908 (101), 1909 (67), 1910 (167), 1911 (100), 1912 (74), 1913 (58), 1914 (70), and 1915 (50). Even these low mintages are not indicative of the rarity of the coins today, for many pieces were not distributed, and of those that were, many were put into circulation by collectors who preferred the "mirrorlike" finish used earlier. Between one and two dozen specimens are known of most Proofs today, with the most "common" issue being the 1908 with-motto, of which two to three dozen exist. The term "rare" loses its meaning when used to describe Proof gold coins, especially of the larger denominations, for each and every piece is a great rarity in absolute terms.

The large and impressive double eagle has always held a special place in collectors' hearts. Several attempts have been made to collect one of each date and mintmark variety, and near-completion has rewarded some of these efforts. The MCMVII "regular" high relief Saint-Gaudens double eagle has created an interest far beyond that of the circle of gold coin collectors. Over the years numerous collector surveys have been taken to determine the most beautiful coin ever minted for circulation. The MCMVII high relief is the usual winner. The story of President Roosevelt's personal involvement with the production of this coin, the free rein given to Saint-Gaudens, and the many difficulties experienced contribute to the romance of the coin. Truly it is an American classic.

Certainly one cannot hold a double eagle in one's hand — whether it be common, scarce, or rare — without experiencing a feeling of greatness. Here, indeed, is represented the most impressive denomination in American coinage.

Lot No. 1275

The Excessively Rare Dougle-Eagle of 1883

1883 Twenty-Dollar Gold. Perfect brilliant proof gem. Sharp with partly wire edge. Probably the rarest of all of the Liberty head Double-Eagles. The entire coinage consisted of only forty coins, of which number only an infinitesimal number of specimens exist today. Those offered in the past fifty years are from one collection to another, no new specimens having been discovered. Record $1350.00. Worth almost any price.

Lot No. 1276

The Second Rarest Liberty Head Dougle-Eagle, 1884

1884 Twenty-Dollar Gold. Perfect brilliant proof. The left obverse shows a very light hair-line, only visible if the coin is held at a certain angle. A gem of great rarity. Last record made in 1944, $1,050.00. The great collection of gold coins offered recently did not have a specimen. Only 71 specimens struck in all. One of our rarest gold coins.

I am informed by a collector, who made a careful study of these rarities, that the 1884 Double-Eagle of the Philadelphia Mint is even more rare and more difficult to obtain than the 1883.

A page from B. Max Mehl's catalogue of the William Cutler Atwater Collection sale, June 1946.

A Saint-Gaudens Porfolio

Preceding page: View of "Aspet," Augustus Saint-Gaudens' home at Cornish, New Hampshire, from the 1880s until his death in 1907. On the grounds of this estate most of his memorable works were created. Today the Saint-Gaudens National Historic Site is maintained by the National Park Service of the United States Department of the Interior and is opened to the public during summer months. The main house, three studios, the stable building, and expensively landscaped grounds are opened to the public.

Above: The Little Studio on the grounds of the Saint-Gaudens' estate. Within this building the designs for the 1907 $10 and $20 coinage were created.

Right: Bust of Augustus Saint-Gaudens by the artist's assistance, Henry Hering (1873-1949). (Maureen S. Clark photographs; Saint-Gaudens National Historic Site)

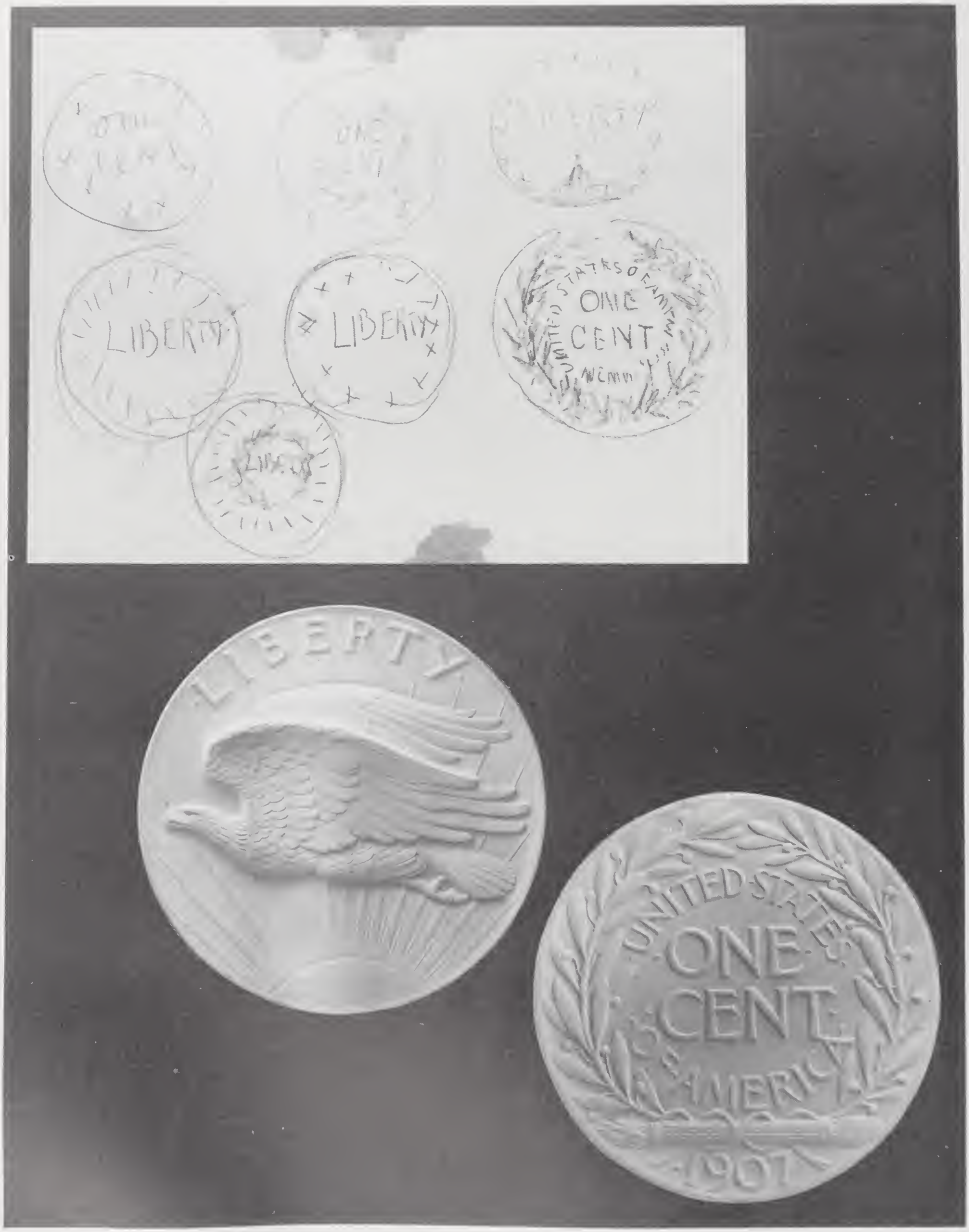
Beginning in 1885, when Augustus Saint-Gaudens spent his first summer there, the Cornish Colony grew to include many well-known figures in the arts and literature. In 1898 the popular American illustrator Maxfield Parish came to Cornish, joining Thomas W. Dewing, Henry O. Walker, Charles A. Platt, and others. By 1905, when a special summer pageant was staged on the grounds of the Saint-Gaudens' estate, the colony numbered 70 members. Winston Churchill, the famous American novelist (who later often was confused by the public with the British statesman of the same name), built a home in Cornish in 1898, the Harlakenden House. President Woodrow Wilson used the structure as the summer White House during his administration.

Attracted by the literary and social scene, many persons of wealth from New York City and elsewhere established homes in the Cornish area, some of which were designed by Charles A. Platt, an artist who later became an architect.

Following the death of Saint-Gaudens in 1907 his widow Augusta and son Homer transferred the estate to the management of a board of trustees. Subsequently the Saint-Gaudens Memorial was established as a non-profit organization to maintain the studios and surroundings as they were during the artist's lifetime. In 1964 the National Park Service accepted the property and since that time it has been maintained by the Department of the Interior.

A view of the Little Studio. The covered grand piano in the left corner was formerly the property of Maxfield Parrish and was moved to its present location in later years.

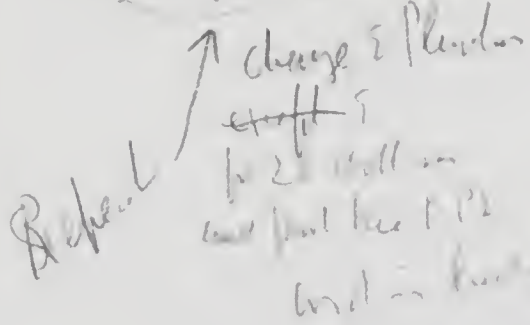
View of one side of the Little Studio on the grounds of Saint-Gaudens' estate, "Aspet," in Cornish, New Hampshire. In the corner is the artist's desk and part of his reference library. Slighly to the right of center is a study comprising three figures in plaster intended for use in the Boston Public Library. Unfinished at the artist's death in 1907, the final figures used with the library structure were completed by Bela Lyon Pratt, who is remembered by numismatists as the designer of the 1908 $2½ and $5 gold coinage. At the right is a cast of the figure "Diana" done in the early 1890s for use atop of the Madison Square Garden designed by his friend, architect Stanford White.



Sketches and models for a one-cent piece.

Early sketch in clay for the obverse of the $20 piece. Miss Liberty is shown with outstretched wings. The date in Roman numerals, MCMVII, is sketched above. In her left hand she holds a shield emblazoned "LIBERTY JVSTICE." Saint-Gaudens made some marginal notes including "head higher," "shield lower," and "more of right fo[rearm]." Miss Liberty wears a feathered headdress, a concept carried through to another plaster model but not used on the finished coin. (Maureen S. Clark photograph; Saint-Gaudens National Historic Site)

Following pages: On the following three pages are reproduced sketches and models for proposed coins. (Sketches courtesy of Dartmouth College Library)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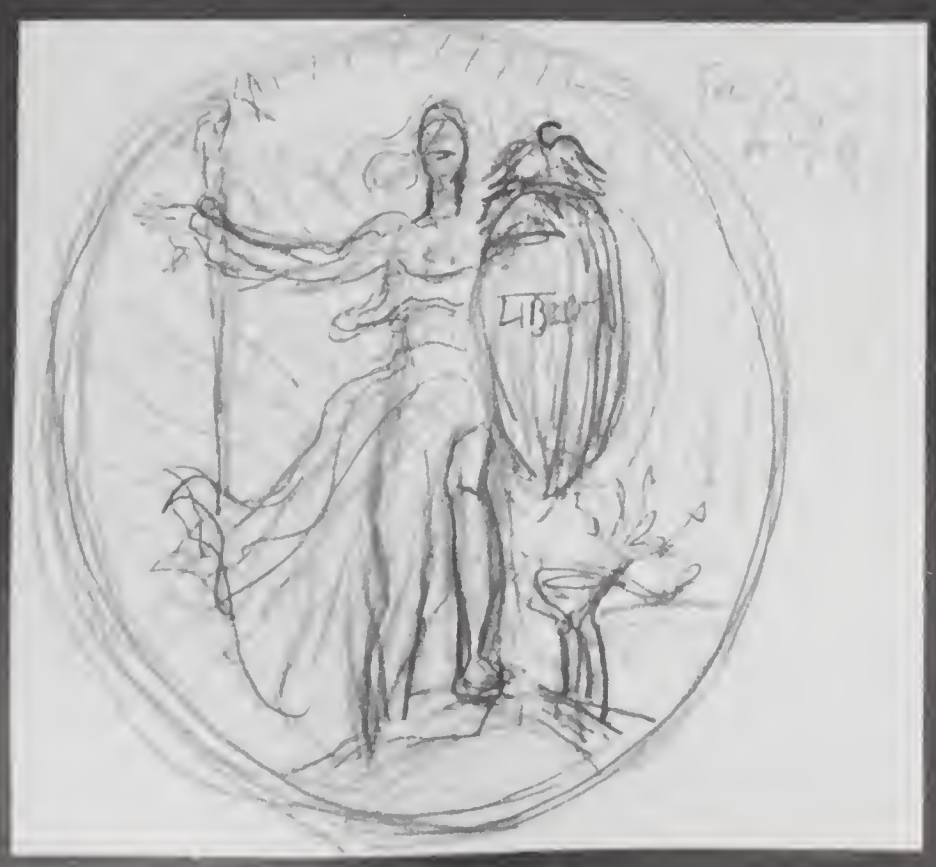
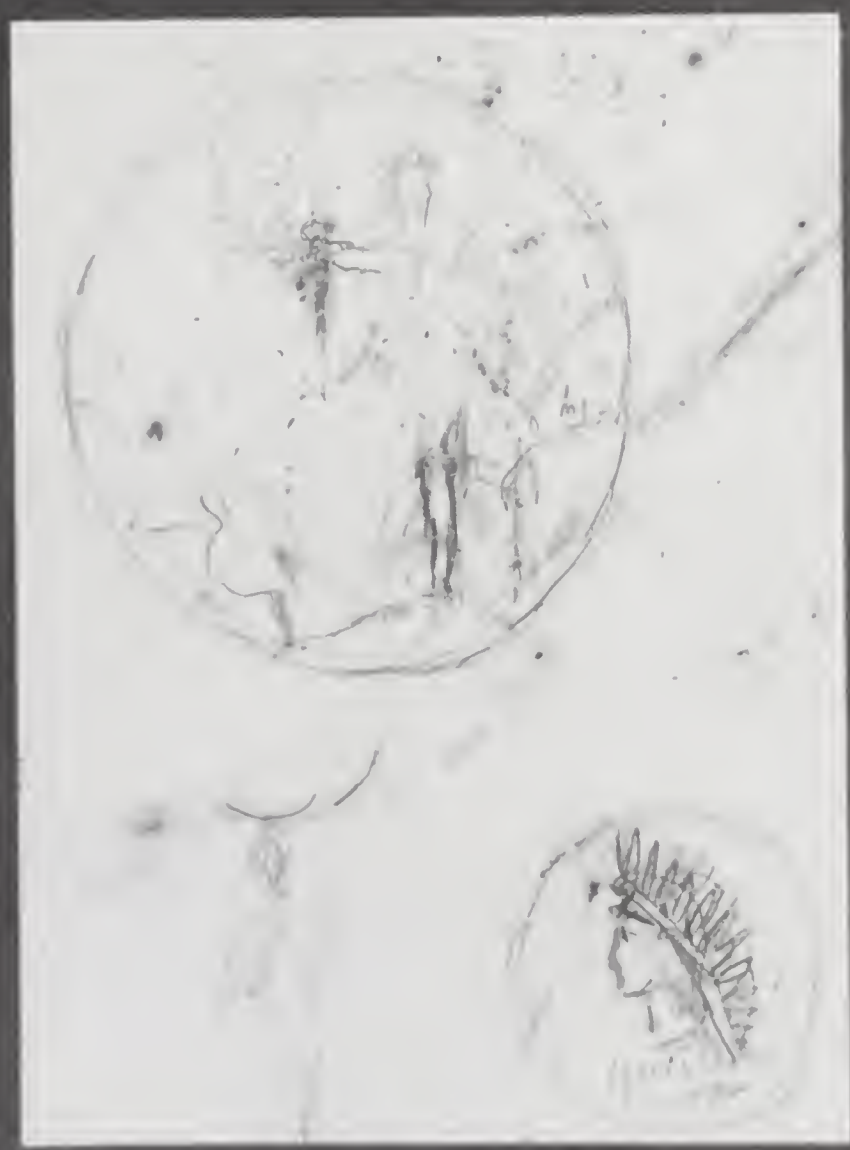
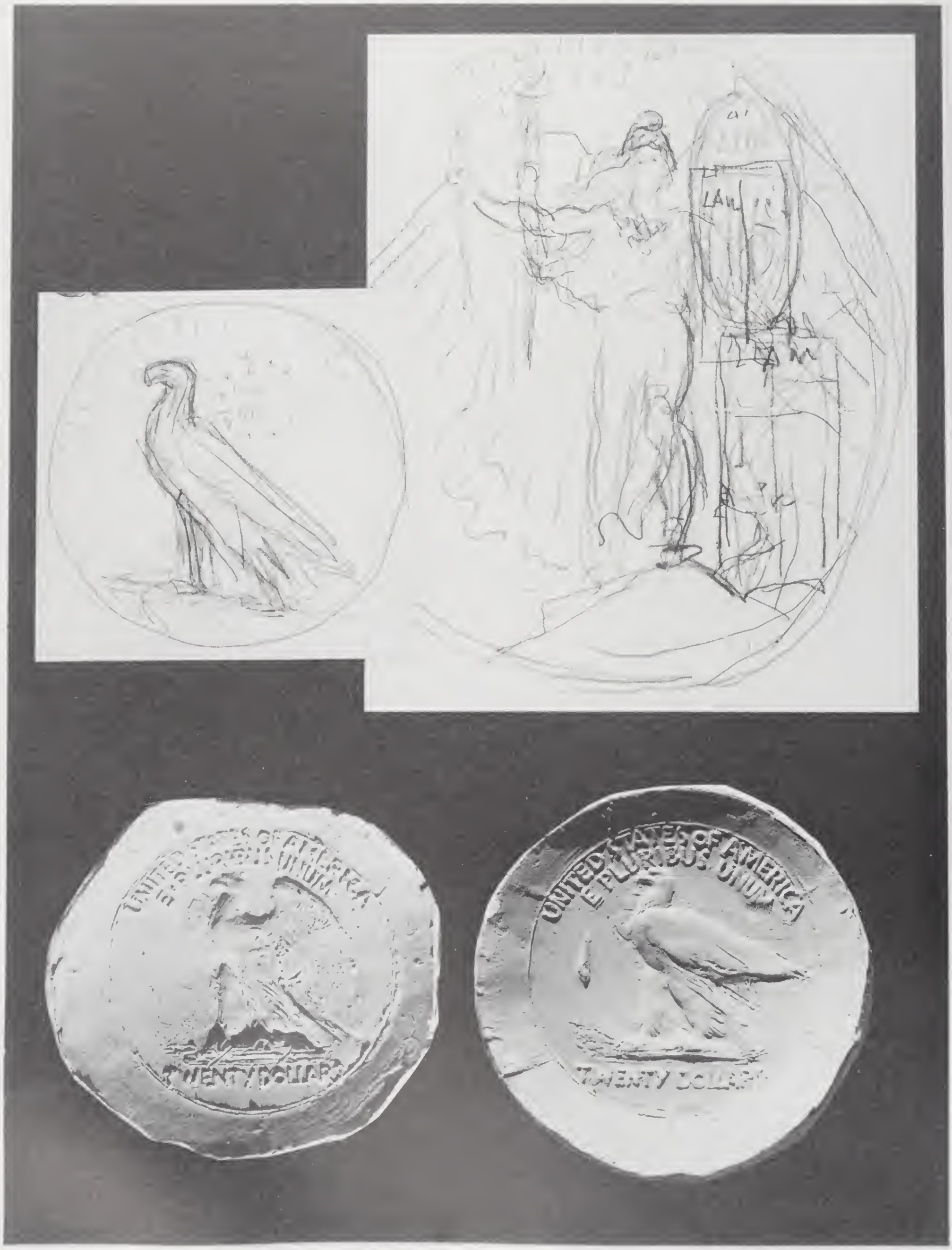


THE CENTURY ASSOCIATION
7 WEST FORTY THIRD STREET




UNITED STATES OF AMERICA
TWENTY DOLLARS
UNITED STATES OF AMERICA
E PLURIBUS UNUM
TWENTY DOLLARS

Plaster model, reduced in size, one of the first refined designs for the obverse of the MCMVII $20 issue. For the design finally used, Saint-Gaudens eliminated the wings and the feather headdress and revised several other features. The rising sun, shown to the left on the model above, was relocated behind the standing figure on the final design.

The author (Q. David Bowers) with a cast of "victory," from the Sherman Monument, on view at the Saint-Gaudens National Historical Site. This figure was used as a model for the MCMVII double eagle obverse. (Maureen S. Clark photograph)

To the left is shown a reduced photograph of the plaster cast used to create the extremely high relief MCMVII double eagle. To the right is shown a plaster cast for a proposed obverse design for the 1907 $20 issue. A pattern of the double eagle denomination (Judd-1776) employing this motif was struck, but the proposal never went beyond that point. Later, the basic motif, but with LIBERTY relocated to the headband, was used for $10 pieces of 1907. (Maureen S. Clark photograph; Saint-Gaudens National Historic Site)

Plaster model, reduced in size, for a design originally intended for the one-cent piece. The profile is from the head of Victory used on the Sherman Monument, one of the achievements of which Saint-Gaudens was most proud. The same basic profile, but with the olive wreath replaced by an Indian headdress at the request of President Theodore Roosevelt, was used on the $10 issue of 1907

Left: Cast head of Victory inscribed "To Carlotta" (the artist's daughter-in-law). This profile furnished the design for the $10 piece.

Other American Gold Issues

12

The Coinage of Ephraim Brasher

While the main thrust of the present volume is the subject of regular-issue United States coins of the denominations intended for circulation, for completeness a brief discussion of other gold issues is desirable.

The first gold coin produced in what is now the United States is believed to have been the famous Brasher doubloon, the work of Ephraim Brasher, a New York City silversmith and goldsmith. Born in 1744 of Dutch stock, Brasher married Anne Gilbert in 1766. That he was active in the silversmith trade at the time is evidenced by the existence of a 1766-dated teapot bearing his hallmark, presently owned by the New York Historical Society. During the Revolution he served with the Provincial Army 1775-1776. In 1783 he was a member of the Evacuation Day Committee which celebrated the British troops leaving New York City.

In 1787 Brasher and an associate, John Bailey, petitioned the New York State Assembly for the right to produce copper coinage. At the time Vermont, Connecticut, and New Jersey had authorized similar coinages, and it was expected that New York would likewise benefit from such issues. The copper coinage never materialized, or at least no records to this effect can be traced today.

In the same year Brasher is believed to have produced the 1787-dated doubloon bearing his bold signature BRASHER. The obverse depicted a radiant sun rising over a mountain peak with the sea in the foreground. The legend NOVA EBORACA COLUMBIA EXCELSIOR surrounded. The reverse showed a heraldic eagle grasping arrows and a branch with the surrounding inscription UNUM E PLURIBUS and the date 1787. Possibly dating from the same period is another type of gold coin attributed to the same coiner, the so-called Lima doubloon which is a stylistic copy of a coin of Philip V produced in Lima, Peru, 1742.

Today the 1787 Brasher doubloon is recognized as one of the most desirable and rarest of all early American issues. Two varieties exist of the 1787-dated piece. A unique specimen formerly in the Garrett Collection bears the hallmark EB on the center of the eagle's breast. Seven others are of the same design but with the hallmark on the eagle's wing. Examples of both varieties were represented in the Bowers and Ruddy Galleries sale of the Garrett Collection (a series of four sales extending from 1979 to 1981), with an Uncirculated specimen of the hallmark on wing issue fetching $725,000, the world's record auction price for *any* coin at the time.

19th Century Private and Territorial Gold Coinage

As noted earlier in the present text, 1830 saw the production by Templeton Reid of private $2.50, $5, and $10 issues struck from Georgia gold. In the same year Christopher Bechtler established a coining enterprise in Rutherfordton, North Carolina. From then until about 1852 Bechtler and, later, family members produced a large volume of $1, $2.50, and $5 issues, the $1 being the first of that denomination to be coined

in the United States (official U.S. Mint coinage did not commence until 1849).

The discovery of gold at Sutter's Mill on the banks of the American River in 1848 was the catalyst which drew tens of thousands of people to California and the West. While some early miners averaged half an ounce to an ounce of gold per day, many fared less well. Offsetting this were continually circulating stories of great bonanzas which always seemed to occur someplace else — perhaps just down the river.

Preoccupied by the search for precious yellow metal, most miners took with them little more than essential clothing, mining implements, and a small amount of food. As a result everyday commodities such as horses, flour, eggs, and the like multiplied in value, often cancelling any profits made by panning the streams and ravines. Within a short time merchants, tradesmen, and others set up business to engage in the buying and selling of produce and supplies, assaying and banking, and other activities, many of which proved to be more remunerative than gold hunting itself.

While gold dust measured out by the "pinch" or weighed on a scale was occasionally used in commerce, a lack of standard measurements, the varying honesty (or lack of it) of individual proprietors, and different quantities of gold pureness made trading in raw gold an uncertain experience. Clearly what was needed was a medium of exchange with a fixed and readily recognized value which would be honored by all, miners and merchants alike. Coins fit the bill nicely.

There was one problem: in nearly all areas the number of people on hand and the amount of commerce being done far outstripped the supply of regular United States quarters, half dollars, half eagles, eagles, and other coins in circulation. In the early days of the Gold Rush in California the nearest federal mint, located in New Orleans, was more than a month's journey away, and the Philadelphia Mint was even more distant. For a producer of gold in California to carefully package bullion, pay heavy transportation and insurance charges, ship it to New Orleans or Philadelphia, and then await the return of minted coins involved an untenable delay of several months at the very least.

The government was petitioned to establish an official mint in San Francisco, but legislators in Washington could not be convinced of the urgency or extreme necessity of the situation and dragged the various proposals out in lengthy discussions, with no tangible results coming until the mid-1850s.

In the meantime, to fill the needs of commerce many private individuals, assaying firms, and banks filled the void by producing a stream of gold coins. As might be expected, they varied widely in design and quality, but at least they were better than nothing at all. Some firms, especially those seeking an overly large profit for themselves, flourished briefly and then disappeared. Others lived on for several years or more.

The panoply of different coin designs, denominations, and issuers, together with the romantic circumstances under which they were produced, provide numismatists with coins of special historical importance.

While it is suggested that the reader refer to *The History of United States Coinage as Illustrated by the Garrett Collection*, by the present author (Q. David Bowers), for detailed information concerning individual gold issues, it is appropriate to note here that the first private coins to reach circulation are believed to have been the $5 pieces produced by Norris, Gregg & Norris. Like many other California firms the outfit was comprised of individuals who came from the East.

With relatively few exceptions, California gold coins of the Gold Rush era are elusive. Some are great rarities, the $5 and $10 coins of the Cincinnati Mining & Trading Co. being examples. Principals of the company left Cincinnati to seek their fortune in California. Despite great expectations, difficulties were encountered along the route, with the result that many supplies and provisions had to be abandoned. The dreams of large profits from coining never materialized, and apparently only a few coins were struck in the autumn of 1849, following arrival of the group in San Francisco. It is possible that they were intended only as patterns, for one of the few known pieces, a $10 issue, is struck over a coin of the same denomination issued by Ormsby, another California coiner. This would indicate that the Cincinnati Mining & Trading Co. may not have had facilities for refining gold or preparing planchets and just struck a few pieces to test the dies.

Moffat & Co. issued $16 gold ingots beginning in the summer of 1849. Soon $10 coins were circulated by the firm. Unlike most of its contem-

poraries, Moffat went on to achieve an excellent reputation with the public and engaged in profitable business for several years.

In 1849 Wright & Co., trading as the Miner's Bank, issued $10 pieces which were worth on the average from $9.65 to $9.78 each. In an era in which the public was very conscious of full intrinsic value, the coins were rejected. It was reported in a local newspaper, *Alta California*, on April 11, 1850 that: "The issue of the Miner's Bank is a drug on the market. Brokers refuse to touch it at less than 20 per cent discount."

Assays indicated that $10 pieces issued by J. S. Ormsby Co., which produced coins from a Sacramento facility, were worth just $9.37 each in terms of the metal contained. One of the worst offenders in this regard was the Pacific Co. Specimens sent to the Philadelphia Mint for evaluation showed intrinsic values of $4.48 for the $5 denomination and only $7.86 for the $10. Of the latter Edgar H. Adams, student of the series, wrote that the Pacific issue "enjoys the distinction of being the least valuable of all varieties of $10 pieces ever struck by private persons in this country, making them much condemned in comparison to Baldwin $10 which stand out as the acme of purity in contrast."

Baldwin & Co., which produced its coinage in 1850 and early 1851, was the subject of much abuse. Assays performed on its issues indicated that $20 coins averaged an intrinsic value of $19.40, the $10 issues averaged $9.74, and the $5 pieces were valued at $4.91. The seemingly unreasonable profit caused much public indignation, and in 1851 the public refused to touch the pieces except at a sharp discount. An April 9, 1851 article in the *Pacific News* is perhaps representative of the situation with several companies during the 1849-1851 period:

> THE GOLD COIN SWINDLE. It is perhaps a matter of no especial wonder that the community feels outraged because of the fact that nearly all of the gold coin put in circulation by the private manufacturing establishments is short of weight. A citizen last evening went to Baldwin's establishment, and, presenting two of their own Twenty Dollar gold pieces, asked their redemption in silver. These were taken, and thirty-eight dollars returned.
>
> This is about as cool and direct a piece of shaving as has come under our eye, touching the short-weight gold coin swindle. Why should the community suffer this to go on longer? Why not refuse every dollar of Baldwin's coin as well as that of every other that is not of full value and redeemed on demand. A bank-bill is worth no more than the bare paper upon which its pretty picture is printed, except from the fact that securities are pledged for its redemption. So also with Baldwin's coin. It is worth no more than the actual value of the gold when compared with the government standard.
>
> In the instance we refer to, there was a loss of five per-cent, and as Baldwin's establishment has an immense deal of coin in circulation the proprietors must make a very neat little speculation out of the country and ultimately amass wealth at the expense of the honest and industrious citizens. The only way to stop this swindle seems to be to refuse the coin altogether, not only that issued from Baldwin's mint, but from every other that proves a short weight and not to be redeemed on presentation.

To remedy the situation of uncertain values the California legislature empowered Frederick D. Kohler to be official state assayer. Kohler, who came to California from New York in 1849, operated a private assaying business in San Francisco. Under Kohler's direction large amounts of native gold were converted to bars or ingots, with the fineness in value stamped on each.

Coins issued by Dubosq & Co., San Francisco, were once plentiful in circulation, with an 1851 article noting that from January 1 to March 31st of that year coins with an aggregate value of $150,000 were produced. Today $5 and $10 issues of the firm are numbered among the rarities of the era. Likewise, $5 pieces issued by Dunbar & Co., San Francisco, were once numerous. In 1851 a group of 111 pieces was shipped to the Philadelphia Mint. In an era in which few if any collectors were interested in saving specimens, virtually all were melted. The same fate befell $5 coins issued by Schultz & Co. in 1851.

Despite repeated petitions from California citizens, the federal government in Washington showed little interest in the California coinage problem. It was demonstrated on numerous occasions that a crisis was occurring for want of pieces in circulation, but still Congress dragged its feet. Although it was not until the establishment of the San Francisco Mint in 1854 that the government produced quantities of lower denomination coins for circulation, in September 1850 Congress authorized the secretary of the Treasury to set up an official assay office in the West. The firm of Moffat & Co. was selected to represent the United States, and Augustus Humbert, a New York City maker of watch cases, was appointed

assayer. Early in 1851 large octagonal $50 gold pieces bearing Humbert's stamp were issued. From that time forward thousands of $50 "slugs," as they came to be called, were produced. While these filled a need for a medium of exchange in large transactions and settlements, they helped little to alleviate the plight of the average citizen or storekeeper. Later the facilities, known as the United States Assay Office of Gold, were reorganized under Curtis, Perry & Ward, who subsequently sold the physical plant to the United States government. Part of the coinage building was incorporated into the first San Francisco Mint structure.

Among the private issuers of gold coins in San Francisco, the firm of Wass, Molitor & Co. was one of the most important, although their entry into the field did not begin until relatively late, in 1852. The public placed great confidence in the firm, and $5 gold coins circulated in 1852 met an enthusiastic reception. A view of the operation is provided by an article which appeared in the *San Francisco Herald* on January 8, 1852:

> The very serious inconveniences to which the people of California have been subjected through the want of a mint, and the stream of unwieldy slugs that have issued from the United States Assay Office, have imperatively called for an increase of small coins. The well known and highly respectable firm of Wass, Molitor & Co. have come forward in this emergency, and are now issuing a coin of the value of $5 to supply the necessities of trade. Their coining establishment, located in Naglee's fireproof brick building in Merchant St., is now complete, being provided with the most powerful and improved machinery for such purposes.
>
> The mechanical execution of the coin issued by these gentlemen certainly reflects the highest credit upon their skill. It is a beautiful specimen of art, far superior in finish to anything of the kind ever gotten up in California. It is surrounded by a raised milled edge to protect the surface from being defaced by friction, and almost a *facsimile* of the United States coin.
>
> But the most important part to the public is its fineness and weight, as upon these two qualities combined must depend its value. In this particular it will be found highly satisfactory, and at once secure the confidence of the community. It has a uniform standard of .880, and contains no other alloy than that of silver which is found naturally combined with gold. The weight of each of the $5 pieces, which are the only ones at present issued, is 131 - 9/10s grains.
>
> The standard fineness of the United States Five Dollar piece is .900, weight 127 grains. It is therefore 20/1000 finer than Wass, Molitor & Co. pieces, but this is more than counterbalanced by the latter's being 4 - 9/10 grains heavier, so that the new Five Dollar gold piece is in reality worth five dollars and four cents, as sufficient excess to pay the expense of recoinage at the United States Mint without cost to the depositor.
>
> The reasons Messrs. Wass, Molitor & Co. have adopted this standard of .880 is because this is about the average fineness of California gold, and further because the cost of refining California gold to the United States standard is exceedingly heavy, and the necessary chemicals cannot be obtained in this country. But it will be remembered that the difference is more than made up by the increased weight of 4 - 9/10 grains, which everyone can try for himself on a pair of scales. These coins will be redeemed on presentation in funds received at the Custom House and banks. The high reputation for honor and integrity enjoyed by Count Wass and his associates in this enterprise is an additional guaranty that every representation made by them will be strictly complied with. The public will be glad to have a coin in which they can feel confidence, and which can't depreciate in their hands. The leading bankers, too, sustained and encouraged this issue, and will receive it on deposit. Among others are the heavy houses of Adams & Co., Burgoyne & Co., and Page, Bacon & Co.
>
> Messrs. Wass, Molitor & Co. coining establishment, which is entirely disconnected from the smelting and assaying office, now in active operation, is capable of turning out from $7,000 to $8,000 in Five Dollar pieces per day.

A description of the minting process appeared in the same publication on January 17th:

> We gave a detailed description a few days ago of the new Five Dollar piece issued by this enterprising firm. Since then they have prepared a die for coining Ten Dollar pieces, some of which we have seen struck off. They are superior in mechanical execution to the Five Dollar pieces, and will compare favorably with any coin now on the market. They are similar to the smaller coin, with the exception of being stamped on one side, "SMV (standard mint value) Ten Dollars." A quantity of their coin has been sent on to the Mint, by the bankers who receive it, so that by an official assay the public may be entirely satisfied that it is worth all that it purports to be.
>
> The process by which the crude gold dust is converted into coin is quite intricate and interesting. The metal has to pass through half a dozen different stages in the hands of a dozen workmen before it is turned out of the press ready for circulation. In the first place the dust is placed in suitable vessels and smelted by the heat of a powerful furnace. In its molten state it is run into thick bars or ingots. These are separately assayed with extreme care and nicety by Count Wass. The fineness of each bar being ascertained, silver is either added or subtracted, according as it is above or below the standard fineness, so as to attain a uniform mixed degree of purity. It will be remembered that

there is no alloy of copper in these coins as in those issued from the United States Mint, and hence they have a lighter yellow color.

After the bars have been made of a requisite fineness they are resmelted and cast into smaller bars. These are hammered out, then drawn through slits in a powerful machine — the width of the slit being diminished. By this means it is made to assume the shape of a golden hoop. It is then drawn through a powerful rolling machine graduated to the required thickness, from which it issues a long, thin strip, brightly polished, and of the thickness of the coin. It is then placed under another ingenious machine in which it is cut up into circular pieces the size of the proposed coin. These pieces are generally adjusted to the standard weight on very nice scales prepared for the purpose. If they weigh a little too much, as they always do, they are reduced by filing. They are now ready to be stamped.

The first stage in this process consists of placing them in a milling machine of great power. From this they receive a neat, raised milled edge. Nothing remains now but to place them in the press, where they are stamped. This press operates on the principle of the screw. The circular piece of gold — the embryo coin — is placed upon a die which is to give its impress to one side, while another die, which stamps the other side, is made to descend with great force by whirling the heavily loaded arms of a lever passing through the screw. It is a current Five or Ten Dollar piece, as the case may be. The finishing touch is put to it by roasting it, so as to give it a bright color. All these different processes of course require great scientific and mechanical skill, extreme accuracy, and heavy and complete machinery. All of these requisites Messrs. Wass, Molitor & Co. possess.

Another late entry in the field of private coinage was Kellogg & Co. of San Francisco, which produced its first coins in 1854. Like those of Wass, Molitor & Co., Kellogg issues were readily accepted by the public.

By 1855 the coinage crisis was ameliorated to a degree, and after this year quantities of private gold coins were not minted for circulation. 1855 saw the production of two impressive coins which are highly prized by numismatists today: the $50 pieces of round shape, one style issued in large quantities by Wass, Molitor & Co. and extensively circulated, and the other issued only in Proof format, possibly as a pattern, by Kellogg & Co.

Initial optimism concerning resolution of the coinage crisis proved to be short-lived, for although the San Francisco Mint was in full operation, still there remained a shortage of circulating specimens of federal manufacture. Larger denomination coins seen in the channels of commerce consisted mainly of earlier issues of private gold coins, Mexican issues, and other foreign pieces. The demand for gold coins of specified standard weight and value for export became so great that virtually the entire production of the San Francisco Mint was shipped to distant areas to pay for goods. In September 1856, the San Francisco Mint closed for repairs, further aggravating the situation. In the meantime the supply of private gold coins decreased as numerous pieces were sent to the East and to foreign countries to pay for imported items. On September 19, 1856, *Prices Current*, a commercial publication, noted that unless something changed, the private coiners would have to resume production. However, within a month the San Francisco Mint opened its doors once again, and from that point onward private coins were gradually replaced by mint issues.

In 1849 inhabitants of the Oregon Territory who had journeyed to California and returned bringing gold dust petitioned the legislature to establish a mint. On February 15 of the same year an act providing for a mint in Oregon City was passed. Troubles with the state constitution emerged, and the proposal was declared illegal, after which time a group of eight prominent merchants and citizens banded together to establish a private minting institution. Designated as the Oregon Exchange, the firm produced gold issues of the $5 and $10 denominations. It is believed that coinage was rather small and amounted to about 6,000 examples of the smaller and 2,850 of the larger value.

A similar situation occurred in the Great Salt Lake (Utah) area when Mormons returned from California with large quantities of unrefined gold dust. Church authorities established a mint and, beginning in September 1849, produced $2.50, $5, $10, and $20 pieces. The $10 coins when assayed proved to be worth about $8.70 each. The press, particularly in California, found the coins offensive and noted that they were "spurious," "vile falsehoods," and "debased." In areas other than Salt Lake City they circulated only at a discount of 10 percent to 20 percent from face value. Within Salt Lake City itself there were numerous questions raised, and in 1851 and 1852 many were reluctant to accept the pieces, but the Mormon Church applied pressures which made

Privately-Issued Gold Coins

1830 Templeton Reid
Georgia

1849 Oregon $5

1849 Oregon $10

1851 Augustus Humbert $50

1849 Mormon $5

J. S. Ormsby $10
California

1849 California
Norris, Gregg & Norris

1849 Miners Bank $10
California

1849 Pacific Co. $5
California

1853 U. S. Assay Office of Gold $20
California

1851 Baldwin $10
California

Moffat $16 Ingot
California

1860 Clark, Gruber & Co. $10
Colorado

1861 Clark, Gruber & Co. $20
Colorado

MISSOURI NUMISMATIC SOCIETY

The banking and minting establishment of Clark, Gruber & Co. in the early 1860s. The structure was subsequently sold to the United States government. (From the State Historical Society of Colorado, courtesy of Nolie Mumey).

the coins circulate. Eventually Brigham Young, leader of the Mormons, closed the mint after which time the coins gradually disappeared from circulation. While most Mormon coins were produced from 1849 to 1851 or 1852, in 1860 a new design of $5 coin appeared and circulated extensively.

Gold discoveries in Colorado in 1858 and 1859 created wide attention, with the result that soon there was a large supply of unrefined precious metal in the area. Filling the demand was the firm of Clark, Gruber & Co., bankers, which established a private mint to strike $2.50, $5, $10, and $20 pieces. As related earlier in the present text, these facilities were acquired in 1862 by the federal government which intended to convert the equipment to its own coinage use. However, no coinage under government auspices materialized, and the building was used only as an assay office.

In 1859 Dr. John Parsons, of Quincy, Illinois, came to the South Park area of Colorado. In the next year, 1860, he set up coining dies and presses and produced $2.50 and $5 coins with his imprint. Although these apparently were popular in their day, now only a few examples survive. In a like vein the 1861 issues produced by the banking firm of J. J. Conway & Co., Georgia Gulch, Colorado, varieties of $2.50, $5, $10, are exceedingly rare today. In fact, with the exception of very few private and territorial gold issues, most specimens are elusive. and are not readily obtained except through auction.

Pattern United States Gold Coins

United States pattern gold coins fall into two major categories. First, there are pieces which are truly *patterns*, coins which represent untried or experimental designs or formats. The second group comprises *trial strikings*, test impressions in lesser metals, especially copper and aluminum, of dies intended for regular or pattern gold coinage. The panorama of United States gold patterns is admirably chronicled in *United States Pattern, Experimental, and Trial Pieces*, by Dr. J. Hewitt Judd. In early years, beginning with the 1959 copyright, the book was closely supervised by Dr. Judd, who wrote the text. In recent times Dr. Judd has been inactive, and California dealer Abe Kosoff has gathered data concerning pricing, new varieties, and the like, and has prepared periodic revisions. The information in the book owes a large debt to the volume bearing a somewhat related title, *United States Experimental, Pattern, and Trial Pieces*, written by Edgar H. Adams with the assistance of William H. Woodin and published in bound form in 1913. Until the advent of the Judd reference, the Adams-Woodin work was standard, and patterns were referred to by "AW" numbers, AW-1229, an 1872 pattern quarter eagle, being an example. Today Judd numbers are generally used, and the same piece is designated as J-1230.

An in-depth analysis of gold patterns and trial issues actually struck in gold metal, a survey comprising 51 different varieties, was written by David W. Akers and was published as *United States Gold Patterns* by Paramount International Coin Corporation in 1975. The author discussed each variety, illustrated the piece in color actual size as well as by a black and white enlargement, and gave much information concerning the origin, the number of known specimens, auction appearances and prices, and related data. Literally, it contained just about everything one would hope to know concerning the 51 coins discussed as reflected by auction appearances and information available at the time.

Certain gold patterns have gained great fame among numismatists. The 1879 and 1880 $4 stella pieces, discussed earlier in a separate chapter in the present text, have been incorporated into the regular series and are listed and priced in *A Guide Book of United States Coins* and other popular references. The 1907 MCMVII extremely high relief double eagle has been in the limelight virtually since the time of issue and is certainly one of the most desired of all United States coins. Most other patterns are less well known, with some being obscure.

From the earliest days of gold coinage in 1795 on to well into the nineteenth century, it was a common practice to test new dies for gold coins by making impressions in copper and other inexpensive metals. Few such trial strikings have survived today, because the resulting pieces were recycled for use in copper cent and half cent coinage. The Mint could not afford the extravagance of setting aside trial strikings for museum purposes. Still, apparently a few were saved, for the Judd reference illustrates a 1799 $10 struck in copper and observes that the coin was offered in the 1890 sale of the Lorin G.

Parmelee Collection with the notation that it was "purchased in the Mint." Presumably, it was acquired by unofficial purchase or perhaps by exchange from someone connected with the Mint, perhaps the curator of the Mint Cabinet. Copper, white metal, and silver impressions are known of several varieties of half eagles from the early nineteenth century, including 1803, 1804, 1805, and 1808. Rather than being test strikings produced at the Mint at the time, these are restrikes made during the 1850s from dies discarded as "scrap iron" by the Mint and obtained from a scrap dealer by Joseph J. Mickley, the noted numismatist. At the time of recovery the dies were heavily rusted, so impressions show irregular surfaces.

On this subject, Don Taxay observes the following in *Scott's Catalogue and Encyclopedia of United States Coins*:

> Considering how scrupulous our early mint officials were in important matters, it is amazing with what indifference they treated obsolete coining dies. For example, when the Mint relocated in 1833, a great many old dies were left among the basement rubbish and were subsequently given away. Others were sold at various times as scrap metal, and the wonder is not that impressions were occasionally made from them by collectors, but that so few were made!

During the late 1850s and early 1860s in particular, but also extending well into the 1880s, certain Mint officials and others created "fancy pieces" for sale or trade to collectors. In many instances such coins were restrikes from well-preserved earlier-dated dies. No catalogue of such productions was ever kept, with the result that knowledge of such pieces today is derived from research efforts involving the comparison of die defects and their progression, planchet weights, striking peculiarities, and the like. The 1804 silver dollar and its companion piece, the 1804 Proof gold eagle, represent a vivid case in point. Although neither piece was created until circa 1834, and although they were produced with full knowledge of Mint officials, in later years officers associated with the Mint went to great length to assure questioners that all 1804 dollars were indeed authentic productions made in the year dated. From time to time lengthy "guarantees" were issued to this effect.

The field of pattern, trial, and experimental pieces contains many issues which were probably made later than the date indicated. For example, J-49, a silver impression from Proof 1831 quarter eagle dies, may fit in this category. No example has been seen by the author, so this cannot be verified. Typically, to fix the date of coining a microscopic examination of the surface of the silver impression would be undertaken. If any die cracks or flaws are noted they could then be compared with those existing on gold impressions from the same dies. If a coin known to be part of an original 1831 Proof set (actually made in 1831) has defects or cracks which have progressed further than those on the silver trial piece, this would be de facto proof that the silver impression was made earlier, possibly indeed to test the dies. However, if the silver impression reveals die rust, cracks, and other features not on the original gold impressions it would be logical to conclude that it was made at a significantly later date. Such knowledge does not usually affect the value one way or the other, for only one variety of 1831 silver quarter eagle exists, and anyone wanting one might well consider that its status as an original or restrike would be moot.

Following the Act of June 28, 1834, which revised gold coinage standards, Director of the Mint Samuel Moore supervised experiments involving alloying gold coins with different amounts of other metals. Dr. Judd notes that six distinctly different varieties of alloys were made, each identified by appropriate marks on the reverse above the head of the eagle. Apparently all examples were destroyed, as no pieces have ever been recorded in numismatic collections.

In response to growing interest in the gold dollar denomination, patterns were executed by Christian Gobrecht in 1836. The obverse of these issues bears a liberty cap with rays surrounding, and the reverse consists of a palm branch and inscriptions. It is believed that a dozen or so were struck in March 1836 of an alloy consisting of 90 percent gold and 10 percent copper. In January 1844, additional pieces were struck using silver as an alloy with gold. The intention in 1844 was not to create a delicacy for collectors but, rather, was to produce additional gold dollars for distribution to officials interested in production of the denomination for circulation, an idea which kept recurring. In later years restrikes were indeed made with collectors in mind, as the existence of an 1836-dated gold specimen struck over an 1859-dated gold dollar indicates. It is possible that someone working clandestinely at the Mint

PATTERN GOLD COINS

1877. Fifty-dollars A. W. 1499

1877. Fifty-dollars A. W. 1500

1859. Twenty-dollars A. W. 177 Reverse of Twenty-dollars A. W. 321

1879. Stellas or Four-dollars A. W. 1575 and 1578

Selections from the collection of MR. WM. H. WOODIN.

In 1914 the American Numismatic Society held an important exhibition of rare coins in its New York City museum facility. Borrowed from many numismatists were outstanding pieces, including certain gold coins from the collection of William H. Woodin shown here. Earlier, Woodin owned gold impressions of the two 1877 $50 pieces duplicated; by 1914 they had been given to the government in exchange for duplicate patterns of other issues.

possibly Theodore Eckfeldt (a relative of Adam and Jacob Eckfeldt who has been implicated in unofficial coinage), who may have had access to a medal press and old coining dies but not to unstamped planchets, for an accounting was kept of such planchets made. It would have been a simple thing to take from one's pocket an 1859 gold dollar and to have used it as the planchet. The existence of an 1838 Gobrecht silver dollar boldly overstruck on an 1859-dated Liberty seated dollar demonstrates that this situation occurred more than once. It is believed that restrikes of the 1836-dated gold dollar were made in other metals as well.

In 1849 pattern double eagles were made in anticipation of the circulating coinage which materialized the year following. A detailed discussion of the 1849 double eagle and the 1849 engraved gold dollar appear earlier in the chapters treating those particular denominations.

The gold dollar, following its release into circulation in 1849, proved to be uncomfortably small. In an effort to remedy the situation patterns were made in annular (ringlike) form in 1852. These, too, are discussed earlier in the gold dollar chapter.

In 1857 an unusual pattern quarter eagle was produced. The obverse featured a compact head of Liberty virtually identical to that used on the regular-issue nickel three-cent piece beginning in 1865. The reverse was similar to the regular dies except the eagle was differently executed and the shield was more prominent. In 1858 Anthony C. Paquet prepared pattern gold dollar dies of a design very close to the style currently in circulation except with the head placed slightly lower in the field and with taller letters in the inscription. The reason for issuing this pattern, which was struck in gold and silver, is not clear.

Paquet, born in Hamburg, Germany, the son of a metal worker, came to the United States in 1848. From 1857 through 1864 he served as an assistant engraver at the Philadelphia Mint, producing during his tenure numerous medals and patterns. With the exception of curious varieties of 1860 and 1861 double eagles employing tall letters on the reverse, of which examples of 1861-S (San Francisco) were released by mistake into circulation, none of his designs was ever used for circulating specie. Although the present author dislikes making value judgments, one cannot help but sense a certain awkwardness and lack of proportion in many of Paquet's pattern efforts. They seem to lack the grace of the contemporary Longacre productions.

In 1859 Paquet produced several distinctive double eagle dies, including an obverse featuring the seated figure of Liberty and the reverse with a very heavy oak wreath. Specimens were struck in copper.

1860 saw the production of several gold patterns. The 1857 quarter eagle obverse die with the style similar to that later used on the nickel three-cent piece (1865-1889) was resurrected and combined with a pattern reverse employing the 1860 date, an unusual instance of a coin having one date on the obverse and another date on the reverse! Pattern $5 pieces were struck in gold and in copper to illustrate the denomination on a large diameter very thin planchet, an effort to curtail the practice of hollowing out genuine coins and filling the interior with metal of lesser value. During the 1860s there was considerable experimentation concerning a motto to be used on United States coinage. Such proposals as OUR TRUST IS IN GOD and GOD OUR TRUST were considered, with IN GOD WE TRUST finally being selected. Pattern eagles dated 1861, 1862, and 1863 with GOD OUR TRUST on the reverse were made to the extent of many dozen examples.

In 1866 the motto IN GOD WE TRUST was adopted for use on the half eagle, eagle, and double eagle. Transitional patterns of the preceding year, 1865, with the motto exist of these denominations, struck in copper and gold.

Around this time certain persons at the Mint decided to create delicacies for collectors by producing from Proof dies sets of the various gold denominations struck in other metals, most particularly copper and aluminum. Thus, copper Proof sets of the gold denominations were made in 1867, aluminum "gold" Proof sets were made in 1868, and similar "fancy pieces" were produced for many other years, continuing intermittently to as late as 1885.

In 1868 two distinctive patterns of gold coins were produced, a half eagle by Anthony C. Paquet as the result of a proposal for international coinage, and an eagle by J. B. Longacre, the latter featuring the head of Liberty adapted from the contemporary nickel three-cent piece. Strikings

were produced in various metals. Additional specimens of the Longacre $10 were produced in 1869.

One of the most beautiful and remarkable sets of pattern gold coins was produced in 1872 by William Barber, chief engraver of the Mint. The obverse of each featured a redesigned head of Liberty with flowing hair and curls, enclosed at the top in a Phrygian cap. The reverse depicted a defiant perched eagle holding a shield and arrows. The same reverse design appeared on several silver patterns of the same year. Only one set was struck in gold, several sets were struck in aluminum, and perhaps a half dozen or so were produced in copper. The unique gold set remained intact during the nineteenth century and was acquired by William H. Woodin. Subsequently F. C. C. Boyd acquired the gold dollar and the five larger denominations went to King Farouk of Egypt. In later years Dr. John E. Wilkison acquired the Farouk coins and added to the group the gold dollar, which at that time (1962) was owned by Dr. J. Hewitt Judd. In a spectacular purchase, Paramount International Coin Corporation acquired the Wilkison collection of gold patterns, a group which contained many great rarities and unique pieces, including the 1872 set. The set subsequently went to A-Mark in Los Angeles, and from there to Maryland dealer Julian Leidman, who consigned it to the American Numismatic Association auction handled by Bowers and Ruddy Galleries in 1981. A reserve was placed on the set and was announced at the sale. Bidding approached but did not meet the reserve, so the coins were returned to their owner in whose possession they remained when the present text was written.

The 1874 pattern eagle inspired by Dana Bickford and incorporating his ideas for an international coin is discussed in the chapter on $4 pieces in the present volume. Examples were struck in gold, silver, aluminum, and nickel. In 1875 William Barber produced pattern $5 and $10 pieces incorporating a modified coronet-type head of Liberty, a motif also used on certain pattern twenty-cent pieces.

Two of the most famous American gold patterns were produced in 1877. Designed by William Barber, the coins featured a design somewhat related to the double eagle but of vastly larger format. Two varieties, differing from each other only slightly, were made. An impression of each variety was taken in gold and a half dozen or so of each in copper. These were the first $50 pieces to be made within the Philadelphia Mint, although in San Francisco in the 1850s coins of the same denomination were produced under government auspices by the United States Assay Office of Gold. In 1854 a petition that the San Francisco Mint be allowed to make $50 pieces was submitted to Congress. This proposal, a precursor of the 1877 pattern, was discussed editorially by the *San Francisco Herald* on March 1, 1854:

> A petition has been circulated today . . . that a law may be passed authorizing issue of Fifty Dollar pieces of the same shape and fineness as the United States Double Eagle. It will of course be signed by every business man in the community, the advantages of such an issue being self evident. In a country like our own, where the currency is purely metallic, it is of great importance to have coins issued of a size which will admit of rapid and easy counting, both in receiving and paying money; the experience of our business men goes to show that in the absence of bank notes [which could not be legally circulated in California due to State law] the Fifty Dollar piece is the most convenient coin for such purpose . . .

The proposal was submitted to Sen. William W. Gwin, a California representative in Congress. Gwin in turn forwarded it to James Guthrie, secretary of the Treasury, who replied favorably and stated that in his opinion the coinage would be "judicious and proper." He further acknowledged that the needs of citizens and merchants were different in California than in the East:

> The large denominations of gold coinage are not found to be adapted to circulation in the Atlantic states. It is found that few of the Twenty Dollar pieces, not a great many of Tens, remain in private hands, but are soon passed into the possession of the banks and bankers, and their place is supplied by bank paper. The larger pieces are also more convenient for transportation, and being thus carried to the South and West prevent the transit of the smaller coin which would, if transmitted, remain in permanent circulation amongst the people of those sections of the country . . . It appears to be desirable to increase the coinage of the smaller denomination and to diminish the larger for circulation on this side of the Union . . .
>
> But there are peculiarities in the condition of California which recommend a different scale of coinage in that region. These are: first, the facts stated in the memorial of the prohibition and the entire exclusion of paper money; and, second, the high scale of prices prevalent in California for commodities and services.

These circumstances will make larger denominations of coins useful, particularly in counting and passing large sums. To this may be added that time which will be saved in coining, which may be of much consequence to miners and others . . .

In order to harmonize the proposed large coins to the present recognized coins I recommend that the coinage be authorized for pieces of $100 and $50 and $25, to be called "Union," "Half Union," and "Quarter Union," but that the "Half Union" only will be struck for the present.

This proposal was given to the Committee on Finance. After some revisions, Senator William Gwin brought the matter before the United States Senate. On June 16, 1854, the Senate overwhelmingly passed the bill. However, the legislation was never voted upon by the House of Representatives, and the idea was dropped.

In the July 1909 issue of *The Numismatist* Edgar H. Adams notified collectors that the two unique 1877 $50 pieces had been sold for $10,000 each by John W. Haseltine and Stephen K. Nagy to William H. Woodin of New York City. "This by far exceeds all recorded high premiums paid for any coin ever sold," he noted.

A flap ensued, and it was stated that the coins were rightfully under the possession of the United States government and were never officially released. In a compromise, Woodin returned the pieces to the Mint, receiving in exchange numerous pattern coins of other denominations from Haseltine and Nagy. Today the two pieces are part of the National Coin Collection in the Smithsonian Institution.

In 1878 George T. Morgan and William Barber each produced several varieties of pattern $5 and $10 pieces. Copper and a few gold impressions were made, probably to create rarities for collectors.

In 1879 the $4 denomination made its appearance. These coins, the subject of an earlier chapter, were designated as *stellas* from the star device on the reverse. Charles E. Barber designed the flowing hairstyle and George T. Morgan produced the coiled hair motif. Examples were struck in gold, copper, aluminum, and white metal. Additional pieces of the same design were produced in 1880.

Related to the stellas is the 1879 metric double eagle similar in design to the regular issue but with metric inscriptions encircling the obverse. Examples were struck in gold and copper.

No additional distinctive designs of pattern gold coins are recorded until the 1907 issues of Augustus Saint-Gaudens, treated in detail in the earlier chapters on $10 and $20 pieces. One famous pattern, never produced as regular coinage, is the coin described as J-1776. The coin, a $20 piece, features on the obverse an Indian head similar to that used on the adopted $10. The reverse shows a flying eagle and is similar to that adopted on the $20 but with the Roman numerals MCMVII on the sun below. Appearing as Lot 2434 in Bowers and Ruddy Galleries' sale held in conjunction with the 1981 American Numismatic Association in New Orleans, Louisiana, the coin fetched $475,000 and was sold to Hancock & Harwell, an Atlanta firm. Thus was set the highest auction record ever paid for a coin struck at the Philadelphia Mint.

Commemorative Gold Coins

Although the 1848 CAL. quarter eagle (discussed in detail in the chapter concerning that denomination) was made as a commemorative coin, the first United States commemorative gold issues to be produced in large quantities and offered to the public at premium were the 1903-dated gold dollars produced in connection with the Louisiana Purchase Exposition held in St. Louis, Missouri, from April 30th through December 1, 1904. In 1902 Congress provided for a coinage of 250,000 pieces to be distributed at $3 each. Struck in 1902 and 1903, 125,000 examples each were produced with portraits of Thomas Jefferson and William McKinley. News of the $3 sale price was received unfavorably by collectors. The editor of *The Numismatist* recommended that collectors save their money and buy them later at $2 each or less. Despite such heroic sales efforts as offering the gold dollars in stick pins and brooches containing two or three coins each, only 35,000 gold dollars out of 250,000 — 17,500 of each variety — were saved from the melting pot. The process of minting large numbers of commemorative coins, experiencing poor sales, and melting many of them later was well under way. The idea was not new: great difficulties were encountered with the distribution of the 1892-1893 Columbian half dollar coinage, the 1893 Isabella coinage, and the 1900 Lafayette pieces. Concerning the latter, 50,000 were struck, and enthusiastic news releases were released telling of

the great demand for the Lafayette pieces. The secretary of the Lafayette Memorial Commission stated publicly that "orders for nearly 30,000 of the 50,000 had been received from New York City alone." Good intentions not withstanding, only about 36,000 were ever sold, with the remainder of the pieces going to the melting furnaces.

In December 1904 *The Numismatist* carried a notice of the demise of the unsold Louisiana Purchase Exposition commemorative gold dollars, reflecting the futile hope expressed by the exposition management that sales would soon increase:

> It is beneficially decided by the Louisiana Purchase Exposition that the remainder of the Louisiana gold dollars will be returned to the Mint, exchanged for other currency, and converted into bullion. The sale of this coin in consideration of the large premium commanded for them has been successful, but the number sold is but a portion of the entire issue of 250,000 . . .
>
> Considering that the remainder will be destroyed and that the original price placed upon them, $3 each, has been and positively will be maintained, causes the exposition management to believe there will be an immediate increased sale largely from those who have waited expecting to purchase them at a depreciated premium, and that they will be in popular demand for gift purposes during the holidays.
>
> That the price has been maintained and that the remainder is to be destroyed gives to the purchaser a protection that has never been enjoyed with any other souvenir coin and gives the promise that the coin will increase in value . . .

In 1904 Congress authorized the coinage of 250,000 additional gold dollars to be struck for another event, the Lewis and Clark Exposition, which opened in Portland, Oregon, on June 1, 1905. In September 1904 25,000 examples were struck with the 1904 date. The obverse of each featured Capt. Meriwether Lewis and the reverse depicted Capt. William Clark. Subsequently, 35,000 specimens dated 1905 were produced. The Mint had learned its lesson from the Louisiana Purchase Exposition and wisely refrained from coining the entire authorized amount at the outset. Even so, sales were sluggish, and just 9,997 of the 1904 pieces and 10,000 of the 1905 were distributed. The remainder went to the melting pot.

Burned by the 1903 Louisiana Purchase Exposition situation, collectors showed very little interest in the 1904 and 1905 Lewis and Clark issues. As a result, most pieces were distributed to fairgoers, including nearly all of the 1904 issues (some of the 1905 were saved as remainders and parceled out through coin dealers). As the typical fair attendee, not being a numismatist, knew nothing about handling coins properly, relatively few examples were preserved in Uncirculated grade, with the result that this issue is far and away the most elusive commemorative gold dollar today in terms of surviving Mint State examples. In an effort to spur sales, gold dollars were incorporated into various art objects, including sterling silver spoons. Few of these were apparently sold, and today they are seldom seen.

The most colorful chapter in the history of American commemorative gold coins is the story of pieces issued for the Panama Pacific International Exposition held in San Francisco in 1915. The accompanying text, "Farran Zerbe and the Panama Pacific coins," gives an early view of that singular numismatic event and one of the most colorful personalities associated with it.

Farran Zerbe and the Panama Pacific Coins

This article, originally titled "The Coin Outlasts the Throne," was written by Frank Morton Todd and published in 1921 in Volume IV of "The Story of the Exposition." Farran Zerbe's numismatic accomplishments were many and included the presidency of the American Numismatic Association, the adoption of the 1921 Peace design silver dollar, and the formation of an extensive collection of coins which later became the Chase Manhattan Bank Money Museum exhibit. Today the highest award given by the American Numismatic Association, the Farran Zerbe Award, bears his name. This article presents a contemporary view of one of the most colorful individuals in American numismatics.

Farran Zerbe was once a newsboy in Tyrone, Pennsylvania. He had a bank account. He was very proud of it, and proud also of the accuracy with which he made out his deposit slips and conducted his other small transactions. One day he took in change a queer piece of money. It was a silver coin about the size of a dime, and it bore odd, misspelled words, which to the gimlet-eyed newsboy meant nothing. There was upon it, however, the legend "50 CENT." So it was a half dollar, although a bit stunted in its growth, and he counted it for a half dollar and tried to deposit it for a half dollar.

But the cashier said, "What are you trying on us, Farran? You're 50 cents short. And you've got a piece of French money here. That's no good in our country."

Farran Zerbe was a numismatist, but he didn't know it yet — and wouldn't have known the difference between a numismatist and a counterfeiter. That was the first time it had come to his attention that there were more kinds of money than Uncle Sam

The exhibit of Farran Zerbe at the Panama Pacific International Exposition held in San Francisco in 1915. Shown were many coins, medals, notes and other issues from the days of antiquity onward. The same facility offered for sale commemorative coins struck for the Exposition. For many years Zerbe maintained a close connection with the American Numismatic Association. The Farran Zerbe Award, given annually by the ANA, is that organization's highest honor. The following pages: Description of the Panama Pacific coins from a original brochure.

Panama-Pacific Commemorative Coins

To Bankers:

The notable series of coins that were authorized by Congress to commemorate the opening of the Panama Canal were produced at the San Francisco mint during the latter part of the year and have had a very successful distribution during the few months they have been on sale.

The novelty of designs, limited issue and denominations — particularly the $50 gold pieces, the first to be issued by our government—have made the series one of curiosity and popular interest that has been appreciated by banks for the local commendation and publicity a display of a set commands.

The limited number of sets that remain are now offered to banks in a special and rich display case (with hang-up and easel back) as illustrated and priced herein. Your consideration is requested for a set of these coins for your bank, not only from the immediate advantage to come from the publicity to be commanded but as a permanent possesion of the bank that should enhance in value and interest since the issue is limited to not over fifteen hundred sets. Special descriptive matter for local press will be sent.

The prices as established will be maintained and any remainder will be destroyed at the mint. The sale will be continued for the distribution of the remainder — but not later than the close of the post-Exposition period, May 1st, 1916.

Coins will be forwarded by prepaid insured carrier and remittance need not be made until coins are received. Make remittance payable to Panama-Pacific International Exposition Coin Department. Your commissions will have our prompt and careful attention.

Coin and Medal Department

Panama-Pacific International Exposition

San Francisco, Cal.

made, and he was a bit incredulous. If there had been any other kinds, of importance, people would have known about them and they would have circulated on the streets of Tyrone, Pennsylvania; but he had never heard of any. Yet there was his troublesome dime, marked "50 CENT." when it wasn't. He had an itching curiosity to know how it had come about.

He began to ask questions. The cashier was glad to answer them. Then Zerbe began to read everything he could get hold of about coins and medals and the strange things people had used in primitive stages of civilization as media of exchange. He got acquainted with those people, ancient and modern. Being a numismatist involved a great deal he had never contemplated. It was worse, really, than being a philatelist! It led him into strange fields. He could never read Old Sleuth like the other boys; he was sleuthing through translated Hesiod, trying to find out what the ancient Greeks used for money, and why they did.

Being a numismatist he became a geographer, an anthropologist, an archaeologist, an historian, an economist, a student of governments, and political systems, and religions, and mythology, and symbolism and heraldry, and art. He collected coins, currency, medals. He corresponded with scholars and societies of scholars. He became president of the American Numismatic Association, a member of the United States Assay Commission, and publisher of *The Numismatist*.

For Farran Zerbe, that 50-centime piece was the gateway into a broad and liberal intellectual life, a life of absorbing, unending interest; and money in general became, not riches, nor especially a thing to buy luxuries or liquidate debts, nor yet a thing to propagate, but a documentary record of the progress of man and the stages of his civilization at different epochs. Coins were imperishable metal documents and types of art indicative of the refinement and mental energy of the nations producing them. The money of civilized peoples became a chain reaching back, unbroken, 3,000 years, correcting history and contributing to it; and reaching back with some breaks and interruptions not yet linked up, for 2,000 years more.

Zerbe never cared to acquire a coin or a medal for its rarity, but only for what it could tell. In spite of that limitation his collection grew very large. Because of that limitation it became one of the notable collections of the world. He could tell you things about coins and medals you never thought of before; trifling things that might become clues to lost episodes in the lives of nations, economically fundamental things about the essential nature of a medium of exchange, the persistent element of popular valuation found in all media of exchange from the plough beasts of Ulysses to California "slugs." He knew the mintmarks and the marks of the great coin designers. He knew the delight the scholar derives from getting hold of a contemporary portrait of Caesar or Alexander, passed by the sitter and stamped by the government, and how when such a portrait is a good piece of art it authenticates the genius of a people that could breed artists capable of such work.

He added some notable borrowings to his collection and brought them all to the Panama Pacific International Exposition in San Francisco in 1915. The exhibit was installed in the Palace of Liberal Arts, in which department it belonged under the classification, making as a whole the greatest index to money ever collectively displayed, and the most noteworthy numismatic exhibit ever seen at an American exposition.

There were about 20,000 original specimens of what man at the main stages of his evolution and in all known countries has used as money, and the whole collection represented a one time value of at least $50,000.00 . . .

There were clay tablets of accounts from Nippur, constituting a record of values measured in labor, love, stock, and grain. There were implement-shaped metal pieces from China, meant to be the fixed price of the article represented, for even in ancient times people befuddled themselves with the supposition that government could fix prices permanently — a knife-shaped coin, for example, standing for the price of a razor, but without power to enlarge or diminish itself in response to the ever changing relation of razor supply and demand. A similar idea and use of such original token money was found among the Aztecs, indicating either some early connection between the peoples of the two continents or else a mere, common coincidence of fallacious ideas.

There were "plugs" of brick tea, stamped by the Russian Government, notched so they could be broken into small change, and circulated among the peoples of Tibet; long black strips of licorice-soaked tobacco, pierced so they could be strung for necklaces, made in Petersburg, Virginia, and circulated as money in certain South Pacific islands, where they would buy more than anything else you could take there; a slab of copper two feet long, a foot wide, and an inch or so thick, which was once eight dollars in Sweden; and gold coins of some Indian state that were no larger than a pinhead. There was leather money, paper money, shells, wampum of all descriptions, rubber money, condensed milk money, bone, fiber, clay, coal, glass, cloth, and pasteboard, and there were linen notes, and iron coins in the shape of fish hooks and musket balls. There were Russian platinum coins minted when platinum was so little valued that it was thought only good to make jitneys with. There was every kind of wildcat note, including the money of John Law and his Mississippi Bubble. There were interesting historical and financial documents — checks of many presidents, from Washington to Lincoln. There was a check for half a cent, and a photograph of the government voucher for $40,000,000.00 in payment for the French interests in the Panama Canal. There were notes redeemable in rum. And there were private coinages

PANAMA-PACIFIC INTERNATIONAL EXPOSITION

1915 - SAN FRANCISCO - U. S. A.

COMMEMORATIVE COINS

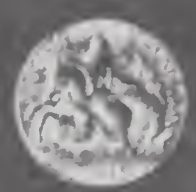
AUTHORIZED BY ACT OF CONGRESS

STRUCK AT SAN FRANCISCO MINT

ONE DOLLAR GOLD—Designs by Charles Keck
Issue limited to 25,000 pieces.

OBVERSE: Head representing Labor through whose efforts the Panama Canal became a reality. UNITED STATES OF ✻ AMERICA ✻ 1915

REVERSE: Two dolphins indicating the meeting of the two oceans. ONE DOLLAR ✻ PANAMA-PACIFIC EXPOSITION ✻ SAN FRANCISCO



QUARTER EAGLE ($2½) GOLD—Designs by Charles E. Barber
Issue limited to 10,000 pieces.

OBVERSE: Columbia seated on the mythical sea horse. Columbia with the Caduceus, the emblem of trade and commerce, inviting the nations of the world to use the new way from Ocean to Ocean. PANAMA-PACIFIC EXPOSITION ✻ 1915

REVERSE: American Eagle on a standard bearing the motto E PLURIBUS UNUM ✻ UNITED STATES OF AMERICA ✻ 2½ DOL.

QUINTUPLE EAGLE ($50) GOLD
ROUND AND OCTAGONAL
DESIGNS BY ROBERT AITKEN

The first Fifty Dollar Gold Piece to be issued under the authority of the United States. Total issue limited to 3,000 pieces.

The motives used in these designs were selected by the sculptor because of their simple dignity and far-reaching significance, as well as for their decorative pattern.

HALF DOLLAR SILVER
DESIGNS BY CHARLES E. BARBER
Issue limited to 200,000 pieces.

OBVERSE: Columbia scattering flowers; attendant with cornucopia, to signify the boundless resources of the West. Background, Golden Gate illumined by the rays of the setting sun. PANAMA-PACIFIC EXPOSITION ✻ 1915

REVERSE: Shield of the United States surrounded by American Eagle and supported on the one side by a branch of oak, emblem of strength and stability, and on the other side by the olive branch of peace. UNITED STATES OF AMERICA ✻ HALF DOLLAR ✻ IN GOD WE TRUST

OBVERSE: Minerva, the Goddess of Wisdom, Art, Contemplation, Science, Weaving and of Agriculture and Horticulture. UNITED · STATES · OF · AMERICA ✻ FIFTY · DOLLARS ✻ ꓘꓢꓢꓤ · is held · IN GOD ✻ WE TRUST

REVERSE: Owl, sacred to Minerva, the sleepless symbol of Wisdom, perched upon a branch of western pine. · PANAMA-PACIFIC · EXPOSITION ✻ SAN FRANCISCO · is held · E ✻ PLURIBUS ✻ UNUM · The Designer's initials, R. A.

Pelicans, depending as they encircle the central disk, uninterrupted water route made possible by the Panama Canal, presage the angles of the octagonal coin.

MOST NOTABLE SET OF COINS EVER ISSUED

In Special Display Case for Bank Publicity (*Hammered Metal Frame with Velvet Tray under Glass*)

Complete Set of Designs $½, $1 and $2½ and choice of $50 (round or octagonal), $100
Complete Set including both shapes $50, as illustrated, $200
Complete Double Set, mounted to show both obverse and reverse, $400

Panama-Pacific Official Coins and Medals

HALF DOLLAR SILVER

Columbia, Eagle. Designed by Charles E. Barber,
60,000 coined, $1 each.

ONE DOLLAR GOLD

Head of Labor. Designed by Charles Keck,
25,000 coined, $2.25 each.

TWO AND ONE HALF DOLLARS GOLD

Columbia on Sea Horse. Designed by Charles E. Barber,
10,000 coined, $4 each.

FIFTY DOLLARS GOLD. Round and Octagonal

Minerva, Owl. Designed by Robert Aitken, N. A.
Limited to 1500 each shape, delivered in leather cases, $100 each.

COMPLETE SETS

Complete Set of designs one each $½, $1, $2½, and choice of $50 (round or octagonal) $100.
Complete Set including both shapes $50, as illustrated, $200.
Complete Double Set, mounted to show both obverse and reverse, $400.
Special display frame, as illustrated, or fine leather presentation case, delivered with Complete Sets without additional charge.

SMALL SETS

One each $½, $1 and $2½ in leather presentation case, $7.50.

SPECIAL QUANTITY PRICES

Six each, $½ and $2½, $25.
Six each $½, $1 and $2½, $37.00.

COIN JEWELRY MOUNTINGS

Special mountings for the insertion and removal of coins without injury will be supplied with coins at the following price per coin, extra.
For Half Dollar, Band mountings for charms, sterling silver or sterling gold plated, 50c.
For Gold Dollar, Gold plated band for charms, stick pins, or brooch pins, 50c; solid gold, band mountings for charms only, $1.25.
For Two and One Half Dollars Gold, Gold plated band mountings for charms, 50c; same, solid gold, $1.50.

Panama-Pacific

Official Medal

Authorized by Congress, designed by Robert Aitken, and produced at the Government Minting Demonstration at the Panama-Pacific International Exposition.

Bronze: Bright, Oxidized, Antique, Statuary or Gold Plated, each 25c. With loop for charms, 50c. Coin silver, $1.00.

OFFICIAL ENGRAVINGS

In the government's demonstration of the process of making paper money at the Exposition there was produced extraordinary examples of engraving and plate printing, seven different subjects, 7 x 10 inches, the set of seven, postpaid, 35c.

Address orders to: *Coin and Medal Department*
Panama-Pacific International Exposition
San Francisco, Cal.

such as the 50-dollar slugs of California, beaver coins of Oregon, Mormon issues of Utah, and the Bechtler coins of the South.

There were coins here that showed something about the art, architecture, mythology, religion, sports, and pleasures of every period of Greece in her glory, and Rome in her fall. The deterioration that followed the universal tragedy of a dead empire was reflected in the barbarous crudities of the coins of the Dark Ages. There was siege money in all its variety; the devices of besieged cities to carry on business in spite of war. It told sometimes of lost causes, of nations going down; it suggested civilizations destroyed and forgotten.

The collection aroused great interest in the subject of numismatics, and well it might. It was one of the most definite educational factors of the Exposition.

The Exposition Coins and Medals

On the basis of federal legislation the Exposition instituted an official Coin and Medal Department, and put it under the direction of Farran Zerbe. The Act of Congress provided that a series of commemorative medals, a souvenir medal, the award medal, and the diplomas, were to be produced by the government and delivered to the Exposition at face value for the coins and at cost for the other items . . . The Secretary of the Treasury was authorized to obtain suitable designs; but the Exposition had no voice in the selection of them, and did not know what the coins would look like when they were finally delivered.

Owing to the lateness of the date on which the Act of Congress was passed — January 16, 1915 — it was impossible to have any of the coins produced until about three months after the opening of the Exposition. In order to have them then, dies for the gold dollar were made by a private concern at the Exposition's expense, and they were probably the first United States coin dies to be made by other than Government employees since the practical organization of the Mint . . .

In spite of the delay, the Coinage Department took in $17,506 in the Exposition period, and $51,966 in the post-Exposition period. The whole net return of the Exposition's coin and medal business after deducting the cost of materials and all administration came to $65,555.09.

60,000 commemorative half dollars were coined, of which 34 were reserved for assay. Of the 59,966 pieces available, 27,100 were sold and 32,866 were destroyed later at the Mint. 25,034 gold dollars were coined, of which 34 were used for assay and the balance all sold. 10,017 $2.50 gold pieces were struck of which 17 were used for assay, leaving 10,000 available. Of these 10,000 there were 6,750 sold and the rest, 3,250 pieces, were melted.

There were 1,509 of the octagonal $50 pieces made of which 9 were used for assay, 646 were actually sold and 854 went to the melting pot. There were 1,510 round $50 gold pieces including 10 for assay. Just 483 were sold. 1,017 were melted . . .

All of the commemorative Exposition coins were struck at the San Francisco Mint and bear the "S" mintmark . . . For the coining of the $50 pieces a special hydraulic press weighing 14 tons, with a striking power of 450 tons, ordinarily used at the Philadelphia Mint for striking medals, was delivered to the San Francisco Mint.

The striking of the first octagonal 50-dollar gold piece, the largest coin ever authorized by the government, and the first of any other shape than circular, was made a notable occasion at the mint, as the passage of an act authorizing it was a rare tribute to California and the Exposition. The Superintendent, Mr. T. W. H. Shanahan, extended invitations to various dignitaries and to members of the American Numismatic Association, to be present at eleven o'clock on the morning of June 21, 1915, when the first of these coins was struck.

Supt. Shanahan produced the first piece, saying that he was about to strike the first 50-dollar coin ever issued under authority of law in the United States . . . He then pulled the lever and handed the resultant coin to Mr. Moore for inspection. Moore then operated the lever for the second piece, and other members of the party took their turns at making money, keeping up the delightful exercise until lunch time . . .

The various commemorative coins were in good demand. Advance orders amounted to a sales volume of $40,000. Prices were: half dollars, $1 each or 6 for $5. Gold dollars, $2 each, or 6 for $10. $2.50 gold pieces, $4 each, or 6 for $20. $50 gold pieces, either shape, $100 each. Complete sets mounted in metal frames or leather cases sold for $200. That both shapes of the $50 pieces were of the same design was a disappointment and in many cases limited the sale to one coin. On this account, towards the end of the Exposition, sets with choice of one $50 piece were sold at $100 each.

Many sales were made to banks throughout the country. Usually they were of sets mounted in metal (copper) frames . . . With the close of the Exposition this exhibit was moved to the Palace of Fine Arts where it looked very much at home and continued as a sales agency for the Exposition over the post-Exposition period to May 1, 1916. The Department was continued on a mail order basis down to November 1, 1916, when, at the request of the Exposition and by authority of the secretary of the Treasury, the coins remaining unsold were returned to the Mint and destroyed.

In addition to individual specimens of the 1915-S gold dollar, quarter eagle, and two varieties of $50 pieces (one round and one octagonal), offered individually, approximately 1,000 sets were prepared encased in a special copper frame and containing descriptions printed in

gold and purple ribbons. Unfortunately for present-day numismatists, only 300 of these sets found buyers in 1915, most going to banks for display purposes. In 1933-1934, when the government decreed that gold coins were to be returned to the Treasury, banks were the first to honor this directive, with the result that many sets were destroyed. It is estimated that fewer than a hundred such sets survive today.

The large and impressive $50 pieces, designed by Robert Aitken, represent the only instance of a coin of this denomination being produced at an official United States Mint. The format of the pieces was inspired, of course, by the octagonal and round $50 coins made by the United States Assay Office of Gold and others in San Francisco decades earlier.

In 1916 Congress authorized the coinage of not more than 100,000 commemorative gold dollars to be struck at Philadelphia and to be distributed in connection with the McKinley Birthplace Memorial in Niles, Ohio. 20,000 gold dollars, featuring the portrait of McKinley on the obverse and a depiction of the Birthplace Memorial on the reverse, were struck bearing the 1916 date and 10,000 were dated 1917. Offered for sale at $3 each, the coins found few buyers. Numismatists, recalling sales difficulties encountered with earlier commemorative gold dollars, took little interest. The public seemed to care even less about commemorating the martyred president's birthplace. Large quantities were minted, resulting in a net distribution of 9,977 of the 1916 variety and 10,000 of the 1917 issue. In the latter year approximately 10,000 were sold as a group to Fort Worth, Texas dealer B. Max Mehl who apparently paid just slightly over face value for them. For years Mehl, who outbid two others for the group, had an inventory in depth, first offering them for sale at $2.50 each.

In 1922 Congress passed legislation authorizing the coinage of 10,000 gold dollars for the Ulysses S. Grant Centenary Memorial Commission, a request scaled down from 200,000 gold dollars originally requested. 5,000 examples of a special design by Laura Gardin Fraser, with Grant on the obverse and his home on the reverse, were struck with a small star in the obverse field, and a like quantity was produced without the star, thus producing two distinct varieties. Virtually the entire issue went directly to numismatists and dealers, who preserved them carefully, with the result that today nearly all specimens seen are in Uncirculated grade.

The final United States commemorative gold coin from the early twentieth century was produced in connection with the 1926 Philadelphia Sesquicentennial Exposition, commemorating 150 years of American liberty 1776-1926. A quarter eagle bearing a standing female figure of Liberty on the obverse and a depiction of Independence Hall on the reverse was designed by J. R. Sinnock, Mint engraver. Anticipating a tremendous sale, Exposition authorities persuaded the Philadelphia Mint to coin the full 200,000 quarter eagles authorized for distribution. Placed on sale at $4 each, the coins sold fairly well, but not in terms of the number minted. Slightly more than 45,000 escaped the melting pot. The others were reconverted into bullion.

Today, commemorative gold dollars from the early twentieth century are highly prized by numismatists. A complete set consists of nine gold dollars, two quarter eagles, and two $50 pieces. Particularly popular is a so-called eleven-piece set which contains the gold dollars and quarter eagles, leaving out the elusive and expensive $50 coins.

In July 1982 President Ronald Reagan signed into law a bill providing for the coinage of commemorative $10 gold eagles to observe the 1984 Olympic Games, thus setting the stage for another event in the history of United States gold coins.

Other Gold Issues

In addition to the coins enumerated in the preceding text, many other gold issues of numismatic significance were produced. Hundreds of different tokens, medalets, and medals in gold have been produced over the years. A monumental reference by Robert W. Julian, edited by N. Neil Harris, *Medals of the United States Mint, the First Century 1792-1892*, gives detailed descriptions of numerous early issues.

Mint production of gold medals was wonderfully diverse and included just about every subject imaginable. Some were admittedly obscure. For example, one described by Julian features on the obverse the bust of President Rutherford B. Hayes and on the reverse an inscription "TO BENDIX KOPPEL IN RECOGNITION OF HIS SERVICES AS ARBITRATOR FOR THE

UNITED STATES 'MONTIJO' ARBITRATION AT BOGOTA IN 1875." Struck from dies engraved by George T. Morgan, one gold and seven bronze medals were delivered early in 1880. While Bendix Koppel and his activities have long been forgotten by all but the most dedicated students of American history, his name lives on in numismatics. The Julian description is reprinted here for it gives an indication of the historical flavor that this and other medals often possess:

> The origin of the Bendix Koppel medal dates back to 1871, when the chronic revolutionary tendencies in Colombia involved certain American citizens. The *Montijo* was engaged in the coastal trade of Panama, then a department of Colombia, under the command of Capt. Sanders, when it was seized on April 5, 1871. The owners were the Schuber brothers, who apparently lived in Panama City, though United States citizens.
>
> Tomas Herrera seized the boat on open water, but within the three mile limit, while the boat was nearing the landing at Boca Chica. His gang of revolutionaries occupied the ship for 63 days, doing it very serious harm, in addition to the loss of revenue for the rightful owners.
>
> The American government immediately lodged a stiff protest through its minister, Gen. Hurlbutt. Secretary of State Hamilton Fish instructed Hurlbutt to press for damages as well as an apology. Unfortunately, it was to be some time before either would be granted.
>
> It turned out, to everyone's dismay, that the central Colombian government had absolutely no power to intervene in the affairs of dissident states. Revolutionaries could seize the government of a state (or department) and hold it without fear of intervention by the central authorities unless they led an armed revolt against the central government. It was, according to one source, little better than organized anarchy.
>
> Hurlbutt pressed the claim so heavily that the Colombians indicated that they would prefer someone else as American Minister. He was replaced by someone more diplomatic and negotiations slowly dragged on.
>
> At length matters reached an impasse and both sides jointly suggested arbitration. This began February 1874, but was not finally settled until August 1875. The Schuber brothers received more than $33,000 in damages.
>
> The arbitrators were Bendix Koppel (the Danish charge d'affaires at Bogota) for the United States, Mariana Tanco for Colombia, and, as a final arbitrator, British Minister Bunch. When the final award was announced, U. S. Minister Scruggs suggested that Koppel be given an award for his efforts but nothing was done for some years.
>
> On March 6, 1880, the State Department formally ordered the Mint to prepare a pair of dies for the purpose of striking the Koppel medal. The work went very quickly and the one gold and seven bronze medals were struck and delivered by April 10, 1880. Koppel came to the United States in 1883 and visited the Mint in May of that year.

From time to time the United States Mint struck medals of many other subjects, including military heroes, presidents, events in Mint history, public service awards, and others.

In addition, many private minters, Gorham and Tiffany being especially prominent in this regard around the turn of the century, produced gold medals for awards and recognition.

With an eye to creating rarities for collectors, various numismatically-inclined individuals in the past have produced gold strikings of tokens and other pieces normally produced in lesser metals. Thus, when John W. Haseltine produced restrikes in 1874 from the original 1861 dies used to make copper-nickel Confederate States of America cents, he produced seven examples in gold, a metal never contemplated by the original issuer. Restrikes and fantasy pieces of several colonial-related issues were made as well, including the 1785-dated Immune Columbia "cent," the 1776 Continental dollar (from copy dies made a century later), and the fanciful Bermuda gold 20 shilling piece believed to have been produced circa 1880 by Wuesthoff, a New York City dealer. An authentic early American item of extreme importance and rarity is the 1792 WASHINGTON PRESIDENT "Cent" struck in gold, a piece which formed the focus of one of Eric P. Newman's brilliant research projects. A few scattered nineteenth century merchants' tokens are known in gold, some of which may represent impressions struck as souvenirs for those ordering large quantities in copper or other inexpensive metals, while still others were undoubtedly struck especially for sale to collectors.

Concluding Comments

Gold has always occupied a special spot in the heart of mankind, and in the hearts of numismatists gold coins have likewise inspired a special admiration.

Gold coins and related artifacts, once existing in large numbers in many instances, are generally elusive today. Unappreciated by numismatists during the time of issue, gold coins, particularly those with mintmarks, dated well into the twen-

tieth century are in some instances great rarities. By the time collectors avidly sought them, most had long since been melted. Indeed, the face value of gold coins, representing a tremendous buying power decades ago, mitigated against their survival. Few people could afford to casually preserve a $5, $10, or $20 piece, knowing that a double eagle might represent the equivalent of a week or more in wages. The melting pot claimed untold millions of coins. Nearly all American gold coins minted to the old standard prior to 1834 were destroyed in this way, for merchants, bankers, and bullion brokers could realize an instant profit by converting a coined piece to bullion form. Then, a century later in 1933-1934, when stiff penalties were imposed upon innocent American citizens who desired to retain examples of United States coinage but who in many instances were not authorized to do so, the contents of safe deposit boxes, caches under cellar floors, and other holdings of gold coins were dutifully turned into the nearest bank to be destroyed by the government.

In the regular issue American series one gold coin has achieved the ultimate degree of rarity: only one specimen is known to exist in the hands of a collector, the 1870-S $3 gold. Permanently impounded in the Smithsonian Institution is an equal coin, the 1797 half eagle unique not as a date but due to its variety, 16 stars on the obverse and with the heraldic eagle reverse. Of the 1822 half eagle 17,796 were coined, but just three specimens are known to exist today, two in the Smithsonian and one in private hands. Of the 1825/4 half eagle just two exist. From these ultimate rarities in the gold series one can go to the most common of all American issues in terms of numbers still extant, the 1904-S double eagle (of which 5,134,175 were made) and the 1928 of the same denomination (8,816,000). Perhaps several tens of thousands, or even 100,000 or more, exist of these last two. In between these extremes lies the spectrum of American gold coinage. It is a field dotted with rarities, punctuated with history, and complete with exciting numismatic personalities. "The days of old, the days of gold" are mirrored in specimens carefully preserved by numismatists today. Where was the 1822 half eagle before M. David sold it to Virgil Brand in 1899? How did the unique 1870-S $3 escape being placed in the cornerstone of the San Francisco Mint? If 682 Proof quarter eagles were minted in 1910, why are only a few dozen known today? What did Washington, D. C. proprietors of bordellos do with the $4 gold coins they received?

While some of these answers are known now, and while others can be guessed at, some will remain forever elusive. And, that is perhaps as it should be, for it gives a quintessence, an undefinable extra dimension, to American gold coins and their fascinating history.

Appendices

Appendix I

United States Gold Coins Specifications

United States Gold Coins: Specifications

The following specifications are those specified by law or by the Treasury as correct for the various United States coin denominations. Individual specimens encountered may show slight deviations. The 1879-1880 $4 Stellas normally weigh 108 grains, but certain of the 1879-dated restrikes made in 1880 weigh in the 103-109 grain range. Coins struck before about 1834 may vary about ±0.5 mm in diameter from the measurements given below.

Denomination	Weight			Composition		Diameter	Edge
	Grams	Grains	Oz. Gold	Gold	Copper		
Gold Dollars							
1849-1854	1.672	25.8	.04837	.900	.100	13 mm	Reeded
1854-1889	1.672	25.8	.04837	.900	.100	14.86 mm	Reeded
Quarter Eagles							
1796-1808	4.374	67.5	.12151	.9167	.0833	20 mm	Reeded
1821-1827	4.374	67.5	.12151	.9167	.0833	18.5 mm	Reeded
1829-1834	4.374	67.5	.12151	.9167	.0833	18.2 mm	Reeded
1834-1839	4.18	64.5	.12094	.8992	.1008	18.2 mm	Reeded
1840-1929	4.18	64.5	.12094	.900	.100	17.78 mm	Reeded
Three Dollars							
1854-1889	5.015	77.4	.14512	.900	.100	20.67 mm	Reeded
Four Dollars							
1879-1880	7	108	.19287	.857	.100*	21.59 mm	Reeded
Half Eagles							
1795-1829	8.75	135	.25789	.9167	.0833	25 mm.	Reeded
1829-1834	8.75	135	.25789	.9167	.0833	22.5 mm	Reeded
1837-1838	8.36	129	.24169	.8992	.1008	22.5 mm	Reeded
1839-1840	8.36	129	.24169	.900	.100	22.5 mm	Reeded
1840-1929	8.36	129	.24187	.900	.100	21.54 mm	Reeded
Eagles							
1795-1804	17.5	270	.51577	.9167	.0833	33 mm	Reeded
1838-1907	16.718	258	.48375	900	.100	27 mm	Reeded
1907-1911	16.718	258	.48375	.900	.100	27 mm	46 Raised Stars
1912-1933	16.718	258	.48375	.900	.100	27 mm	48 Raised Stars
Double Eagles							
1849-1907	33.436	516	.9675	.900	.100	34.29 mm	Reeded
1907-1933	33.436	516	.9675	.900	.100	34.29 mm	E PLURIBUS UNUM with words divided by stars

Appendix II

United States Gold Coins Design Types

United States Gold Coins: Design Types

The collecting of United States gold coins by design types has been a popular pursuit for many decades. Precisely what constitutes a "type" is a matter of debate. Among very early issues, particularly those prior to 1808, there are many variations in the number of leaves, berries, the placement of stars, and other features.

The following listing outlines major design types of regular issues as well as several popular patterns which traditionally have been incorporated into sets and collections, the 1879-1880 $4 issues being examples. The major varieties are listed as headings, and sub-varieties represented by the addition of a motto or some other modification of the design are listed under the main headings.

I. Gold Dollars 1849-1889

Liberty Head (Type I) 1849-1854

1849 Small Head, Open Wreath, No L
1849 Large Head, Open Wreath, L
1849-1854 Large Head, Closed Wreath

Indian Princess Head (Type II) 1854-1856

1854-1856 Small Head

Indian Princess Head (Type III) 1856-1889

1856-1889 Large Head

II. Quarter Eagles ($2½) 1796-1929

Capped Bust to Right 1796-1807

1796 No Obverse Stars
1796-1807 Obverse Stars

Capped Bust to Left 1808

1808

Capped Head to Left 1821-1834

1821-1825 Large Diameter, Small Stars
1829-1827 Large Diameter and Stars
1829-1834 Reduced Diameter

Classic Head 1834-1839

1834-1839 Classic Head

Coronet Head (or Liberty Head) 1840-1907

1840-1858 First reverse
1848 CAL. (commemorative issue)
1859-1907 Reverse modified slightly

Indian Head 1908-1929

1908-1929 Indian Head

III. Three-Dollar Gold Pieces 1854-1889

1854 Small Dollars
1855-1889 Large Dollars

IV. Four-Dollar Gold Pieces (Stellas) 1879-1880

1879-1880 Flowing Hair (pattern issue)
1879-1880 Coiled Hair (pattern Issue)

V. Half Eagles ($5) 1795-1929

Capped Bust to Right 1795-1807

1795-1798 Small Eagle reverse
1795-1807 Large or Heraldic Eagle reverse

Capped Draped Bust to Left 1807-1812

1807-1812 Capped Draped Bust to left

Capped Head to Left 1813-1834

1813-1829 Large Diameter
1829-1834 Reduced Diameter

Classic Head 1834-1838

1834-1838 Classic Head

Coronet Head (or Liberty Head) 1839-1908

1839-1840 No Motto, Large Diameter
1840-1866 No Motto, Reduced Diameter
1866-1908 With Motto (IN GOD WE TRUST)

Indian Head 1908-1929

1908-1929 Indian Head

VI. Eagles ($10) 1795-1933

Capped Bust to Right 1795-1804

1795-1797 Small Eagle reverse
1797-1804 Large or Heraldic Eagle reverse

Coronet Head (or Liberty Head) 1838-1907

1838-1839 No Motto, Type of 1838
1839-1866 No Motto, Type of 1840
1866-1907 With Motto (IN GOD WE TRUST)

Indian Head 1907-1933

1907 No Motto, Rounded edge (pattern issue)
1907 No Motto, Wire edge (pattern issue)
1907-1908 No Motto, No periods
1908-1911 With Motto, 46 edge stars
1912-1933 With Motto, 48 edge stars

VII. Double Eagles ($20) 1849-1933

Coronet Head (or Liberty Head) 1849-1907

1849-1866 No Motto
1861 Paquet reverse
1866-1876 With Motto, TWENTY D. reverse
1877-1907 With Motto TWENTY DOLLARS reverse

Saint-Gaudens 1907-1933

MCMVII No Motto Extremely high relief (pattern issue)
MCMVII No Motto, High relief
1907-1908 No Motto
1908-1911 With Motto 46 obverse stars
1912-1933 With Motto, 48 obverse stars

Appendix III

United States Gold Coins Designers

United States Gold Coins: Designers

Listed below are the *designers* of United States gold coins. While in many instances the designers of the coin also engraved the dies, in certain other instances dies were engraved at the Mint using designs furnished by others (the Saint-Gaudens designs of 1907 and the Pratt designs of 1908 being examples).

In numerous instances designs were altered slightly, mottoes were added, and other functional changes were made after the initial appearance of the motif. The designers listed are those who originated the designs. Employees of the Mint engraving department who modified the designs in later years are not enumerated. Indeed, the identities of certain such individuals will never be known with certainty.

Gold Dollars 1849-1889

James B. Longacre, using ideas suggested by others, designed the 1849-1854 style. He originated the concept and design for the later two major types in the series, the type of 1854-1856 and the type of 1856-1889.

Quarter Eagles 1796-1929

Robert Scot 1796-1807
John Reich 1808-1834
William Kneass 1834-1839
Christian Gobrecht 1840-1907
Bela Lyon Pratt 1908-1929

Three-Dollar Gold Pieces 1854-1889

James B. Longacre

Four-Dollar Gold Pieces 1879-1880

Flowing hair style Charles E. Barber
Coiled hair style George T. Morgan

Half Eagles 1795-1929

Robert Scot 1795-1807
John Reich 1807-1834
William Kneass 1834-1838
Christian Gobrecht 1839-1908
Bela Lyon Pratt 1908-1929

Eagles 1795-1933

Robert Scot 1795-1804
Christian Gobrecht 1838-1907
Augustus Saint-Gaudens 1907-1933

Double Eagles 1849-1933

James B. Longacre 1849-1907
Anthony Paquet 1861 "Paquet Reverse" issues
Augustus Saint-Gaudens 1907-1933

Commemorative Gold Coins

1903 Louisiana Purchase gold dollars. Charles E. Barber
1904-1905 Lewis & Clark gold dollars. Charles E. Barber
1915-S Panama Pacific gold dollar. Charles Keck
1915-S Panama Pacific quarter eagle. Charles E. Barber and George T. Morgan
1915-S Panama Pacific $50 gold pieces. Robert Aitken
1916-1917 McKinley gold dollars. Charles E. Barber and George T. Morgan
1922 Grant Memorial gold dollars. Laura Gardin Fraser
1926 Philadelphia Sesquicentennial quarter eagle. John R Sinnock

Appendix IV

Philadelphia Mint Gold Coin Production Business Strikes

Philadelphia Mint Gold Coin Production
Business Strikes

Date	$1	$2½	$3	$5	$10	$20
1795				8,707	5,583	
1796		1,395[1]		6,196	4,146	
1797		427		3,609	14,555[11]	
1798		1,094		24,867[6]	1,742[12]	
1799				7,451	37,449	
1800				37,628	5,999	
1801					44,344	
1802		3,035		53,176		
1803				33,506	15,017	
1804		3,327		30,475	3,757	
1805		1,781		33,183		
1806		1,616		64,093		
1807		6,812		84,093[7]		
1808		2,710		55,578		
1809				33,875		
1810				100,287		
1811				99,581		
1812				58,087		
1813				95,428		
1814				15,454		
1815				635		
1816						
1817						
1818				48,588		
1819				51,723		
1820				263,806		
1821		6,448		34,641		
1822				17,796		
1823				14,485		
1824		2,600		17,340		
1825		4,434		29,000		
1826		760		18,069		
1827		2,800		24,913		
1828				28,029		
1829		3,403		57,442[8]		
1830		4,540		126,351		
1831		4,520		140,594		
1832		4,400		157,487		
1833		4,160		193,630		
1834		116,234[4]		707,601[9]		
1835		131,402		371,534		
1836		547,986		553,147		

Date	$1	$2 1/2	$3	$5	$10	20
1837		45,080		207,121		
1838		47,030		286,588	7,200	
1839		27,021		118,143	38,248	
1840		18,859		137,382	47,388	
1841		Proofs Only		15,833	63,131	
1842		2,823		27,578	81,507	
1843		100,546		611,205	75,462	
1844		6,784		340,330	6,361	
1845		91,051		417,099	26,153	
1846		21,598		395,942	20,095	
1847		29,814		915,981	862,258	
1848		8,886[5]		260,775	145,484	
1849	688,567	23,294		133,070	653,618	2[15]
1850	481,953	252,923		64,491	291,451	1,170,261
1851	3,317,671	1,372,748		377,505	176,328	2,087,155
1852	2,045,351	1,159,681		573,901	263,106	2,053,026
1853	4,076,051	1,404,668		305,770	201,253	1,261,326
1854	1,639,445[1]	596,258	138,618	160,675	54,250	757,899
1855	758,269	235,480	50,555	117,098	121,701	364,666
1856	1,762,936[2]	384,240	26,010	197,990	60,490	329,878
1857	774,789	214,130	20,891	98,188	16,606	439,375
1858	117,995	47,377	2,133	15,136	2,521	211,714
1859	168,164	39,364	15,558	16,734	16,013	43,517
1860	36,514	22,563	7,036	19,763	15,055	577,611
1861	527,150	1,283,788	5,959	688,084	113,164	2,976,387
1862	1,361,355	98,508	5,750	4,430	10,960	92,098
1863	6,200	Proofs Only	5,000	2,442	1,218	142,760
1864	5,900	2,824	2,630	4,170	3,530	204,235
1865	3,700	1,520	1,140	1,270	3,980	351,175
1866	7,100	3,080	4,000	6,700	3,750	698,745
1867	5,200	3,200	2,600	6,870	3,090	251,015
1868	10,500	3,600	4,850	5,700	10,630	98,575
1869	5,900	4,320	2,500	1,760	1,830	175,130
1870	6,300	4,520	3,500	4,000	3,990	155,150
1871	3,900	5,320	1,300	3,200	1,790	80,120
1872	3,500	3,000	2,000	1,660	1,620	251,850
1873	125,100	178,000	Proofs Only	112,480	800	1,709,800
1874	198,800	3,920	41,800	3,488	53,140	366,780
1875	400	400	Proofs Only	200	100	295,720
1876	3,200	4,176	Proofs Only	1,432	687	583,860
1877	3,900	1,632	1,468	1,132	797	397,650
1878	3,000	286,240	82,304	131,720	73,780	543,625

Date	$1	$2 1/2	$3	$5	$10	$20
1879	3,000	88,960	3,000	301,920	384,740	207,600
1880	1,600	2,960	1,000	3,166,400	1,644,840	51,420
1881	7,620	640	500	5,708,760	3,877,220	2,199
1882	5,000	4,000	1,500	2,514,560	2,324,440	571
1883	10,800	1,920	900	233,400	208,700	Proofs Only
1884	5,230	1,950	1,000	191,030	76,890	Proofs Only
1885	11,156	800	801	601,440	253,462	751
1886	5,000	4,000	1,000	388,360	236,100	1,000
1887	7,500	6,160	6,000	Proofs Only	53,600	Proofs Only
1888	15,501	16,001	5,001	18,201	132,921	226,161
1889	28,950	17,600	2,300	7,520	4,440	44,070
1890		8,720		4,240	57,980	75,940
1891		10,960		61,360	91,820	1,390
1892		2,440		753,480	797,480	4,430
1893		30,000		1,528,120	1,840,840	344,280
1894		4,000		957,880	2,470,735	1,368,940
1895		6,000		1,345,855	567,700	1,114,605
1896		19,070		58,960	76,270	79,535
1897		29,768		867,800	1,000,090	1,383,175
1898		24,000		633,420	812,130	170,395
1899		27,200		1,710,630	1,262,219	1,669,300
1900		67,000		1,405,500	293,840	1,874,460
1901		91,100		615,900	1,718,740	111,430
1902		133,540		172,400	82,400	31,140
1903		201,060		226,870	125,830	287,270
1904		160,790		392,000	161,930	6,256,699
1905		217,800		302,200	200,992	58,919
1906		176,330		348,735	165,420	69,596
1907		336,294		626,100	1,443,305[13]	1,824,703[16]
1908		564,821		999,719[10]	374,870[14]	4,427,809[17]
1909		441,760		627,060	184,789	161,215
1910		492,000		604,000	318,500	482,000
1911		704,000		915,000	505,500	197,250
1912		616,000		790,000	405,000	149,750
1913		722,000		915,001	442,000	168,780
1914		240,000		247,000	151,000	95,250
1915		606,000		588,000	351,000	152,000
1916						
1917						
1918						
1919						228,250
1920						

Date	$1	$2 1/2	$3	$5	$10	$20
1921						528,500
1922						1,375,500
1923						566,000
1924						4,323,500
1925						2,831,750
1926		446,000			1,014,000	816,750
1927		388,000				2,946,750
1928		416,000				8,816,000
1929		532,000		662,000		1,779,750
1930						
1931						2,938,250
1932					4,463,000	1,101,750
1933					312,500	445,500[18]

Footnotes

Gold Dollars:
1. includes both Type I and II varieties.
2. includes both upright and slant 5 varieties.

Quarter Eagles:
3. includes both stars and no stars varieties.
4. includes both motto and no motto varieties.
5. includes regular issue and special CAL. variety.

Half Eagles:
6. includes 1795 and 1797 Heraldic eagle varieties.
7. includes both Capped bust to right and Capped draped bust to left varieties.
8. includes both large and small planchet varieties.
9. includes motto and no motto varieties.
10. includes both Liberty and Indian varieties.

Eagles:
11. includes small and large eagle varieties.
12. includes the 9 x 4 and 7 x 6 stars varieties.
13. includes both Liberty and Indian varieties.
14. includes no motto and motto varieties.

Double Eagles:
15. two were reported struck. Only one is known.
16. includes both Liberty and St. Gaudens varieties.
17. includes no motto and motto varieties.
18. none officially released.

Appendix V

Philadelphia Mint Gold Coin Production Proofs

Philadelphia Mint Gold Coin Production
Proofs

The following production figures for United States Proof gold coins are the same as those found in *A Guidebook of United States Coins* and *The Coin World Almanac*. The figures are from official Mint records and show *production* of coins. *Distribution* was often less. In some instances, the accuracy of the mint figures is questionable, the 1910 mintage of Proof quarter eagles being one of many examples.

In the early years it was the custom to strike Proof gold coins in advance and keep them "on the shelf" for possible sale. It is probable that many nineteenth century issues were distributed in far lesser quantities than the mint figures suggest.

Date	$1	$2½	$3	$5	$10	$20
1859	80	80	80	80	80	80
1860	154	112	119	62	50	59
1861	349	90	113	66	69	66
1862	35	35	35	35	35	35
1863	50	30	39	30	30	30
1864	50	50	50	50	50	50
1865	25	25	25	25	25	25
1866	30	30	30	30	30	30
1867	50	50	50	50	50	50
1868	25	25	25	25	25	25
1869	25	25	25	25	25	25
1870	35	35	35	35	35	35
1871	30	30	30	30	30	30
1872	30	30	30	30	30	30
1873	25	25	25	25	25	25
1874	20	20	20	20	20	20
1875	20	20	20	20	20	20
1876	45	45	45	45	45	45
1877	20	20	20	20	20	20
1878	20	20	20	20	20	20
1879	30	30	30	30	30	30
1880	36	36	36	36	36	36
1881	87	51	54	42	42	61
1882	125	67	76	48	44	59
1883	207	82	89	61	49	92
1884	1006	73	106	48	45	71
1885	1105	87	110	66	67	77
1886	1016	88	142	72	60	106
1887	1043	122	160	87	80	121
1888	1079	92	291	94	72	102
1889	1779	48	129	45	45	41
1890		93		88	63	55
1891		80		53	48	52
1892		105		93	72	93
1893		106		77	55	59
1894		122		75	43	50
1895		119		81	56	51
1896		132		103	78	128
1897		136		83	69	86
1898		165		75	67	75
1899		150		99	86	84
1900		205		230	120	124
1901		223		140	85	96
1902		193		162	113	114
1903		197		154	96	158
1904		170		136	108	98
1905		144		108	86	90
1906		160		85	77	94
1907		154		92	74	78
1908		236		167	116	101
1909		139		78	74	67
1910		682		250	204	167
1911		191		139	95	100
1912		197		144	83	74
1913		165		99	71	58
1914		117		125	50	70
1915		100		75	75	50

Appendix VI

Carson City Mint Gold Coin Production

Carson City Mint Gold Coin Production

Date	$1	$2½	$3	$5	$10	$20
1870				7,675	5,908	3,789
1871				20,770	8,085	17,387
1872				16,980	4,600	26,900
1873				7,416	4,543	22,410
1874				21,198	16,767	115,085
1875				11,828	7,715	111,151
1876				6,887	4,696	138,441
1877				8,680	3,332	42,565
1878				9,054	3,244	13,180
1879				17,281	1,762	10,708
1880				50,017	11,190	
1881				13,886	24,015	
1882				82,817	6,764	39,140
1883				12,958	12,000	59,962
1884				16,402	9,925	81,139
1885						9,450
1886						
1887						
1888						
1889						30,945
1890				53,800	17,500	91,209
1891				208,000	103,732	5,000
1892				82,968	40,000	27,265
1893				60,000	14,000	18,402

Appendix VII

Charlotte Mint Gold Coin Production

Charlotte Mint Gold Coin Production

Date	$1	$2 1/2	$3	$5	$10	$20
1838		7,880		17,179		
1839		18,140		17,205		
1840		12,822		18,992		
1841		10,281		21,407		
1842		6,729		27,432		
1843		26,064		44,277		
1844		11,622		23,631		
1845						
1846		4,808		12,995		
1847		23,226		84,151		
1848		16,788		64,472		
1849	11,634	10,220		64,823		
1850	6,966	9,148		63,591		
1851	41,267	14,923		49,176		
1852	9,434	9,772		72,574		
1853	11,515			65,571		
1854	4[1]	7,295		39,283		
1855	9,803	3,677		39,788		
1856		7,913		28,457		
1857	13,280			31,360		
1858		9,056		38,856		
1859	5,235			31,847		
1860		7,469		14,813		
1861				6,879		

Footnote

1 unknown in any collection.

Appendix VIII

Dahlonega Mint Gold Coin Production

Dahlonega Mint Gold Coin Production

Date	$1	$2 1/2	$3	$5	$10	$20
1838				20,583		
1839		13,674		18,939		
1840		3,532		22,890		
1841		4,164		29,392		
1842		4,643		59,608		
1843		36,209		98,452		
1844		17,332		88,982		
1845		19,460		90,629		
1846		19,303		80,294		
1847		15,784		64,405		
1848		13,771		47,465		
1849	21,588	10,945		39,036		
1850	8,382	12,148		43,984		
1851	9,882	11,264		62,710		
1852	6,360	4,078		91,584		
1853	6,583	3,178		89,678		
1854	2,935	1,760	1,120	56,413		
1855	1,811	1,123		22,432		
1856	1,460	874		19,786		
1857	3,533	2,364		17,046		
1858	3,477			15,362		
1859	4,952	2,244		10,366		
1860	1,566			14,635		
1861	Unknown[1]			1,597		

Footnote

1. mintage assumed to be 1,000 to 2,000.

Appendix IX

Denver Mint
Gold Coin Production

Denver Mint Gold Coin Production

Date	$1	$2 1/2	$3	$5	$10	$20
1906				320,000	981,000	620,250
1907				888,000	1,030,000	842,250
1908				148,000	1,046,500	1,013,250
1909				3,423,560	121,540	52,500
1910				193,600	2,356,640	429,000
1911		55,680		72,500	30,100	846,500
1912						
1913						393,500
1914		448,000		247,000	343,500	453,000
1915						
1916						
1917						
1918						
1919						
1920						
1921						
1922						
1923						1,702,250
1924						3,049,500
1925		578,000				2,938,500
1926						481,000
1927						180,000
1928						
1929						
1930						
1931						106,500

Appendix X

New Orleans Mint Gold Coin Production

New Orleans Mint Gold Coin Production
Pre-Civil War Issues

Date	$1	$2 1/2	$3	$5	$10	$20
1839		17,781				
1840		33,580		40,120		
1841				50[1]	2,500	
1842		19,800		16,400	27,400	
1843		364,002		101,075	175,162	
1844				364,600	118,700	
1845		4,000		41,000	47,500	
1846		62,000		58,000	81,780	
1847		124,000		12,000	571,500	
1848					35,850	
1849	215,000				23,900	
1850	14,000	84,000			57,500	141,000
1851	290,000	148,000		41,000	263,000	315,000
1852	140,000	140,000			18,000	190,000
1853	290,000				51,000	71,000
1854		153,000	24,000	46,000	52,500	3,250
1855	55,000			11,100	18,000	8,000
1856		21,100		10,000	14,500	2,250
1857		34,000		13,000	5,500	30,000
1858					20,000	35,250
1859					2,300	9,100
1860					11,100	6,600
1861						17,741

Footnote

1. unknown in any collection.

New Orleans Mint Gold Production
Post-Civil War Issues

Date	$1	$2 1/2	$3	$5	$10	$20
1879					1,500	2,325
1880					9,200	
1881					8,350	
1882					10,820	
1883					800	
1884						
1885						
1886						
1887						
1888					21,335	
1889						
1890						
1891						
1892				10,000	28,688	
1893				110,000	17,000	
1894				16,600	107,500	
1895					98,000	
1896						
1897					42,500	
1898						
1899					37,047	
1900						
1901					72,041	
1902						
1903					112,771	
1904					108,950	
1905						
1906					86,895	
1907						
1908						
1909				34,200		

Appendix XI

San Francisco Mint Gold Coin Production

San Francisco Mint Gold Coin Production

Date	$1	$2 1/2	$3	$5	$10	$20
1854	14,632	246		268	123,826	141,468
1855			6,600	61,000	9,000	879,675
1856	24,600	72,120	34,500	105,100	68,000	1,189,750
1857	10,000	69,200	14,000	87,000	26,000	970,500
1858	10,000			18,600	11,800	846,710
1859	15,000	15,200		13,220	7,000	636,445
1860	13,000	35,600	7,000	21,200	5,000	544,950
1861		24,000		18,000	15,500	768,000
1862		8,000		9,500	12,500	854,173
1863		10,800		17,000	10,000	966,570
1864				3,888	2,500	793,660
1865		23,376		27,612	16,700	1,042,500
1866		38,960		43,920	20,000	842,250
1867		28,000		29,000	9,000	920,750
1868		34,000		52,000	13,500	837,500
1869		29,500		31,000	6,430	686,750
1870	3,000	16,000	2[1]	17,000	8,000	982,000
1871		22,000		25,000	16,500	928,000
1872		18,000		36,400	17,300	780,000
1873		27,000		31,000	12,000	1,040,600
1874				16,000	10,000	1,214,000
1875		11,600		9,000		1,230,000
1876		5,000		4,000	5,000	1,597,000
1877		35,400		26,700	17,000	1,735,000
1878		178,000		144,700	26,100	1,739,000
1879		43,500		426,200	224,000	1,223,800
1880				1,348,900	506,250	836,000
1881				969,000	970,000	727,000
1882				969,000	132,000	1,125,000
1883				83,200	38,000	1,189,000
1884				177,000	124,250	916,000
1885				1,211,500	228,000	683,500
1886				3,268,000	826,000	
1887				1,912,000	817,000	283,000
1888				293,900	648,700	859,600
1889					425,400	774,700
1890						802,750
1891						1,288,125
1892				298,400	115,500	930,150
1893				224,000	141,350	996,175

Date	$1	$2½[1]	$3	$5	$10	$20
1894				55,900	25,000	1,048,550
1895				112,000	49,000	1,143,500
1896				155,400	123,750	1,403,925
1897				354,000	234,750	1,470,250
1898				1,397,400	473,600	2,575,175
1899				1,545,000	841,000	2,010,300
1900				329,000	81,000	2,459,500
1901				3,648,000	2,812,750	1,596,000
1902				939,000	469,500	1,753,625
1903				1,855,000	538,000	954,000
1904				97,000		5,134,175
1905				880,700	369,250	1,813,000
1906				598,000	457,000	2,065,750
1907					210,500	2,165,800
1908				82,000	59,850	22,000
1909				297,200	292,350	2,774,925
1910				770,200	811,000	2,128,250
1911				1,416,000	51,000	775,750
1912				392,000	300,000	
1913				408,000	66,000	34,000
1914				263,000	208,000	1,498,000
1915				164,000	59,000	567,500
1916				240,000	138,500	796,000
1917						
1918						
1919						
1920					126,500	558,000
1921						
1922						2,658,000
1923						
1924						2,927,500
1925						3,776,500
1926						2,041,500
1927						3,107,000
1928						
1929						
1930					96,000	74,000

Footnote

1 Two were reported struck. Only one is known.

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